

Washington Park Arboretum

Waterfront Trail Renovation

100% DESIGN

Parks Specification # 0000 Prk # 0000-000

Funding Source: Seattle Parks District/Other Funding Source

Owner:

City of Seattle Department of Finance & Administrative Services,
Purchasing & Contracting Services Division

Administering Department:

City of Seattle Department of Parks and Recreation, Planning & Development Division
800 Maynard Avenue South, Third Floor, Seattle, WA 98134
Project Manager: Garrett Farrell 206-233-7921

Project Design Team:

Anchor QEA
1201 3rd Avenue, Suite 2600, Seattle WA 98101
Primary Contact: Peter Hummel, P.L.A. 206-287-9130

KPFF

2407 N. 31st Street, Suite 100, Tacoma, WA 98407
Primary Contact: Ian Frank, P.E. 253-396-0150

LEGAL DESCRIPTION:

WASHINGTON PARK ARBORETUM WATERFRONT TRAIL (NON-DNR PARCELS)

PARCEL 212504-9048 ABBR. LEG. DESC.:

LOT 1 BLK 11A SUPPLEMENTAL MAP OF LAKE WASHINGTON SHORE LANDS TGW PORTION GOVT LOT 1 STR 21-25-04 CONTIGUOUS TO SD LOT 1 BLK 11A WCH LIES NORTH OF LN PLL WITH & 618 FT SOUTH OF N LN SD SEC 21 & EAST OF MONTLAKE PARK LESS PORTION THOF CONVEYED TO STATE OF WASHINGTON BY DEED REC NO 5447962 & LESS POR PER DEED REC #20140529001467

PARCEL 212504-9144 ABBR. LEG. DESC.:

THAT POR OF THE "HARBOR AREA" IN NW 1/4 OF NE 1/4 SD STR LY SLY N SWLY OF THE COMBINED U.S. BULKHEAD & PIER HEAD LN ESTAB BY THE US DEPT OF ARMY JULY 15 1949 & LY NWLY OF NWLY LN OF LOT 1 BK 11A SUPL MAP OF LAKE WA SHORE LANDS AS SHOWN ON THE OFFCL MAP OF SD SL FILED IN THE OFFICE OF THE COMMISSIONER OF PUBLIC LANDS IN OLYMPIA WA & LY NLY OF OLD CANAL ROW (CANAL RESERVE) & LY WLY OF A TR OF LD DELINEATED ON & DESG "PARK" IN THE PLAT OF MONTLAKE PARK VOL 18 PG 20 EXCPTG THEREFROM ANY POR LY WITHIN SR 520 LESS POR PER DEED REC# 20140221001260

PARCEL 560500-0646 ABBR. LEG. DESC.:

MONTLAKE PARK ADD LESS POR PER DEED REC # 20141126001568

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MONTLAKE PARK ADD LESS POR PER DEED REC # 20141126001568

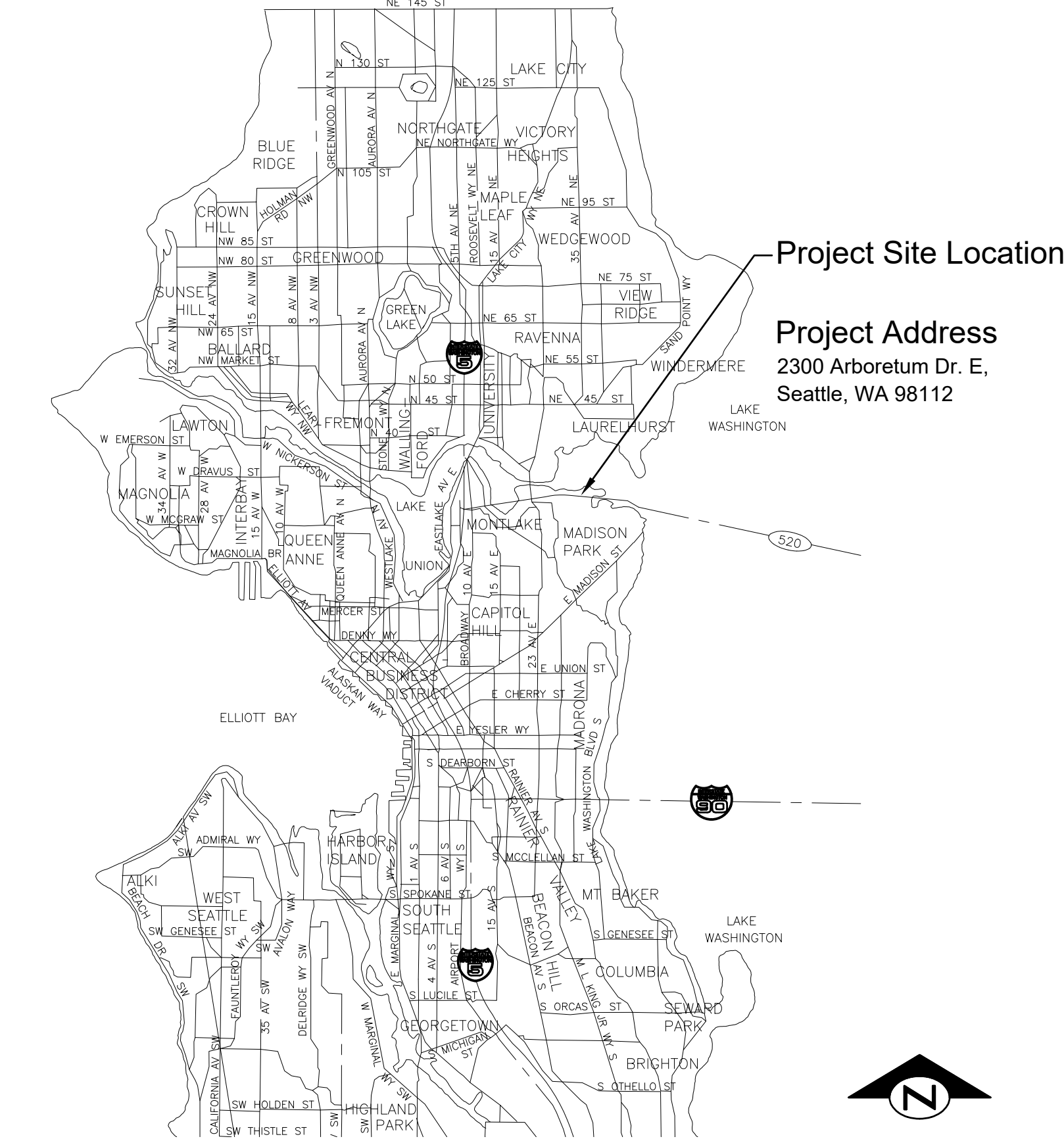
PARCEL 411460-0275 ABBR. LEG. DESC.:

LAKE WASHINGTON SHORE LANDS ADD ALL 16 & ALL 17 LESS ST HWY & LESS POR PER DEED REC # 20140221001261

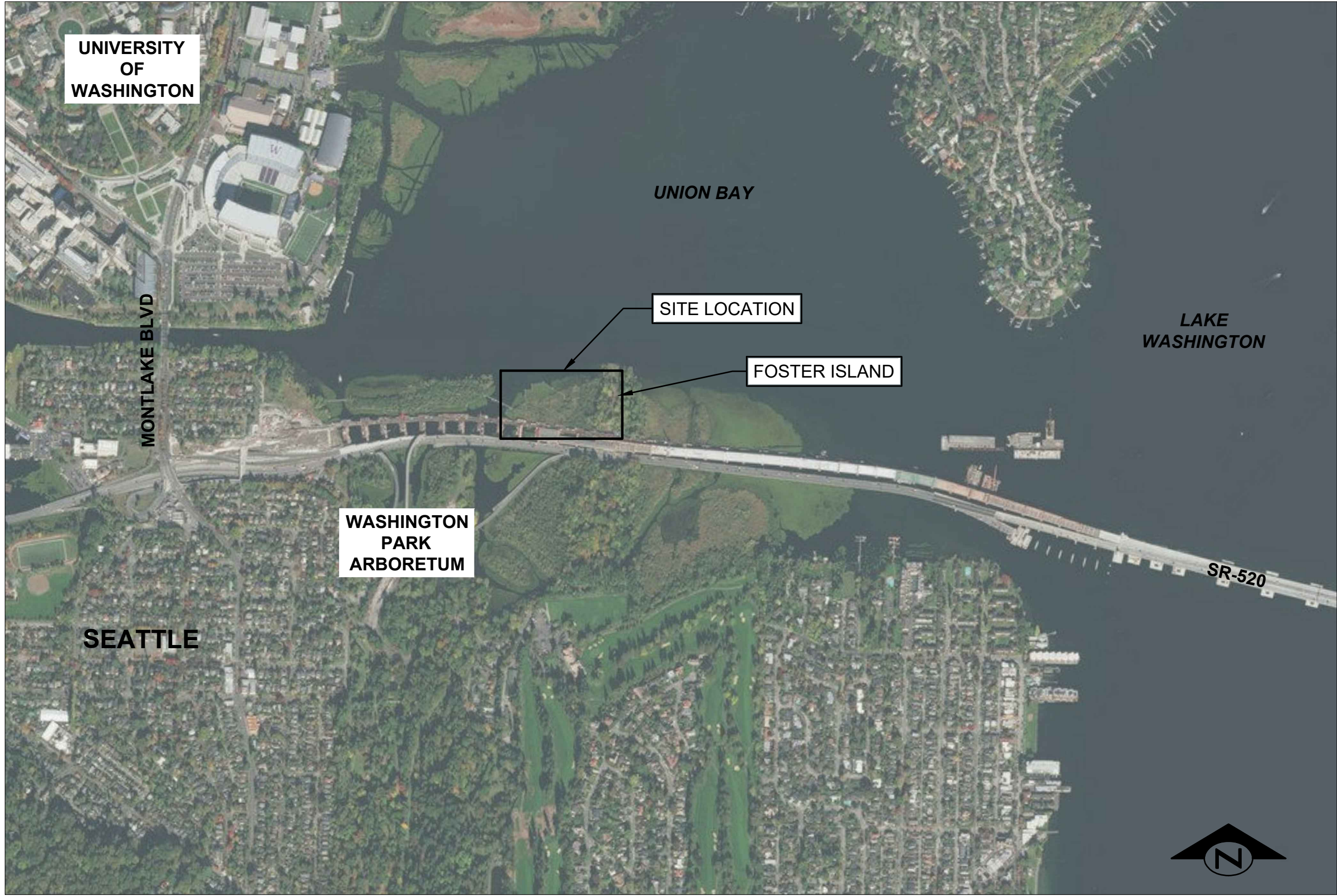
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VICINITY MAP
CITY OF SEATTLE - NOT TO SCALE



LOCATION MAP

APPROVED FOR ADVERTISING: Liz Alzeer City Purchasing & Contracting Services Seattle, Washington _____ Date _____ 20 Signature: _____ Director, City Purchasing & Contracting Services	7			REVIEWED: _____ DATE _____ PARK ENGINEER _____ DATE _____ <small>All work done in accordance with the City of Seattle Standard Plans and Specifications in effect on the date shown above, and supplemented by Special Provisions.</small>				WASHINGTON PARK ARBORETUM	DESIGNED <u>BS</u>	DATE OCTOBER 2020	
	6							WATERFRONT TRAIL PROJECT	DRAWN <u>BS/CH</u>		SHEET <u>1</u> OF <u>31</u> G-1
	5								CHECKED <u>PH</u>		
	4								ORDINANCE NO. _____		
	3							SPECIFICATION NO. _____			
	2							SCALE <u>AS SHOWN</u>			
	1										
	NO.	REVISION — AS BUILT	DATE								

ARBORETUM WATERFRONT TRAIL - MUP No. 3035972-LU
ZONING CODE SUMMARY - APPLICABLE PROVISIONS
ADDRESS: 2300 Arboretum Drive East, Seattle WA 98112
ZONING: Single Family Residential (SF7200)
SHORELINE: Conservancy Preservation (CP)
ECA: Wetland, Potential Liquefaction Area, Landfill, Peat Settlement Prone, Fish & Wildlife Habitat

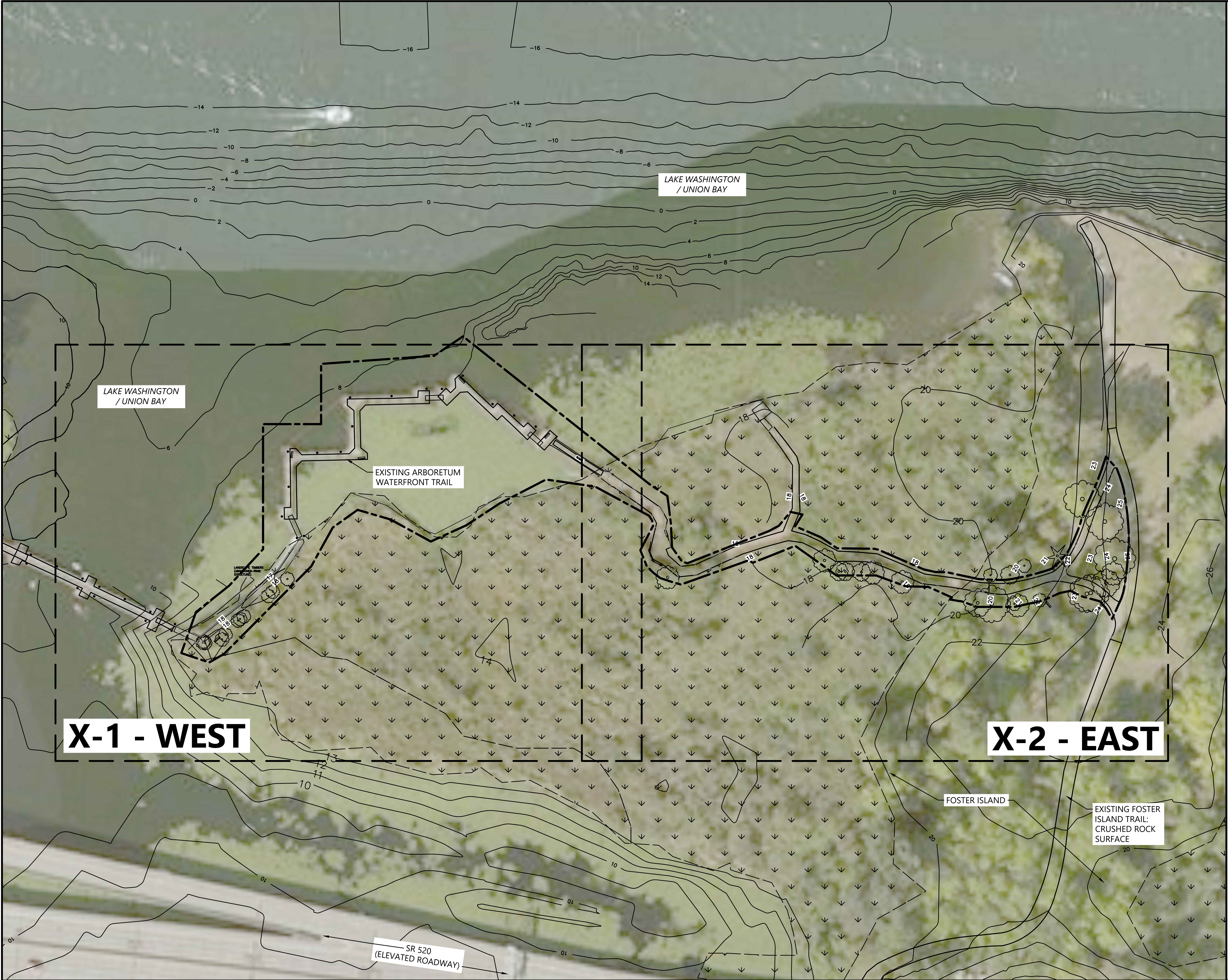
Code Title	Code Section	Required	Proposed
General development	23.60A.152.A	All shoreline developments, shoreline modifications, and uses shall be located, designed, constructed and managed to achieve no net loss of ecological functions.	The proposed fixed and floating boardwalks and steel pilings replace existing solid boardwalk and eliminate the need to continually place wood chips on the trail tread to keep it above the water level; all which improves the ecological function of the habitat on and around Marsh and Foster Islands.
General development	23.60A.152.B	All shoreline development, shoreline modifications, and uses shall be located, designed, constructed, and managed to avoid, or if that is infeasible, to minimize to the maximum extent feasible, adverse impacts or interference with beneficial natural shoreline processes such as water circulation, littoral drift, sand movement, or erosion.	The proposed fixed and floating boardwalks and steel pilings are designed and will be located to minimize adverse impacts or interference with beneficial natural shoreline processes.
General development	23.60A.152.C	All shoreline developments, shoreline modifications, and uses shall be located, designed, constructed, and managed to prevent the need for shoreline defense and stabilization measures and flood protection works.	No shoreline armoring is proposed.
General development	23.60A.152.D	Dredging	No dredging is proposed
General development	23.60A.152.E	Surrounding Use	The proposed fixed and floating boardwalk repairs are consistent with the surrounding park and recreation public use.
General development	23.60A.152.F	Public health and safety	The project is not expected to compromise public health or safety. The proposed replacement fixed and floating boardwalk and pilings will be designed to current code standards.
General development	23.60A.152.G	Disturbed areas	Disturbed areas will be limited to the existing trail corridor and limited areas where abandoned trail segments will be decommissioned and restored.
General development	23.60A.152.H	Best Management Practices	BMPs will be used pursuant to DR 16-2009, Construction Stormwater Control Technical Requirements, to control impacts during construction.
General development	23.60A.152.I	Ground and surface water	The project will be designed, constructed, and operated to protect the quality and quantity of ground and surface water.
General development	23.60A.152.J	Aquatic habitat	The new fixed and floating boardwalk are designed and will be located, constructed, and managed to avoid adverse impacts to aquatic habitat, such as increased salmonid predator habitat and adverse impacts due to shading, to the maximum extent feasible. Construction will be limited to the times of the year when construction will have the least impact on migrating salmonids as set by WDFW and the U.S. Army Corps of Engineers

Code Title	Code Section	Required	Proposed
General development	23.60A.152.K	Durable non-toxic materials	The proposed fixed and floating boardwalk and pilings will be constructed of durable, non-toxic components and materials
General development	23.60A.152.L	Creosote	Existing creosote treated piles will be removed; new piles will be steel
General development	23.60A.152.M	Covered moorage or boat sheds.	The project does not propose covered moorage or boat sheds.
General development	23.60A.152.N	Light transmitting features	Light transmitting features will be incorporated into the new fixed boardwalk.The existing floating boardwalk is made up of concrete floats and will remain in place
General development	23.60A.152.O	Tires.	The project design does not use tires.
General development	23.60A.152.P	Foam	To the extent foam is used as flotation for the new fixed and floating boardwalk components, it will be encapsulated within a shell that prevents breakup or loss of the foam material into the water and that is not readily subject to damage by ultraviolet radiation or abrasion.
General development	23.60A.152.Q	Artificial light	No artificial light is proposed.
General development	23.60A.152.R	The release of oil, chemicals, solid waste, untreated effluents, or other hazardous materials onto or into the water is prohibited.	Spill kits will be on site during construction.
General development	23.60A.152.S	Facilities, equipment and established procedures for the containment, recovery and mitigation of spilled petroleum products shall be provided at recreational marinas, commercial marinas, vessel repair facilities, marine service stations and any use regularly servicing vessels that have petroleum product capacities of 10,500 gallons or more.	The project is not a marina or vessel repair facility
General development	23.60A.152.T	Construction and repair work shall use best management practices to prevent the entry of debris and other waste materials into any water body.	Prior to project construction, the contractor will be required to develop a Spill Plan to address potential entry of debris and other waste materials into Union Bay/Lake Washington.
General development	23.60A.152.U	Construction staging.	Construction staging will take place above OHW Within designated / Parks approved areas upland on the approaches to the waterfront trail .
General development	23.60A.152.V	Fish kill.	In the event of a fish kill, SPR will halt project work and alert the appropriate agencies.
General development	23.60A.152.W	Navigation channels.	The project does not propose any obstruction in navigation channels. The existing bridges between the Ship Canal and Duck Bay will remain in place and maintain existing kayak/small boat access. USCG and ACOE have reviewed these existing elements that date to original trail construction and have determined how they will consult .

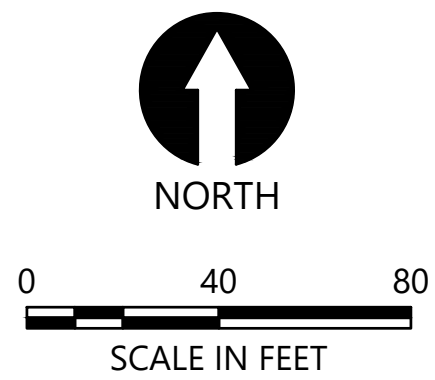
Code Title	Code Section	Required	Proposed
General development	23.60A.152.X	Water-dependent use.	The waterfront trail is an existing facility that accommodates pedestrian access across Marsh and Foster Islands and connect East Montlake Park to the Washington Park Arboretum; One of the purposes of the trail is to accommodate public access to Lake Washington for passive recreational activities such as fishing and bird watching. As such, it is a water dependent use.
General development	23.60A.152.Y	Open areas for boat storage.	The project does not propose open areas for boat storage.
Uses in the CP Environment	23.60A.252	The following park and open space and institutional uses are allowed: “[P]ervious bicycle and pedestrian paths, and viewpoints are allowed as a special use.” 23.60A.252.B.1.	The proposal is for repairs to an existing pervious pedestrian path.
Height in the CP Environment	23.60A.256	Max. height is 15 feet.	No part of the repaired/replaced fixed and floating boardwalk will be higher than fifteen (15) feet above the surface of the water.
Shoreline setbacks in the CP Environment	23.60A.258	More than 20 feet landward of the OHW mark for: 1.Viewpoints accessory to a parks and open space use allowed, or allowed as a special use or as a shoreline conditional use in the CP Environment or for required public access; and 2. Spur trails to access the viewpoints allowed in the setback under subsection 23.60A.258.A.2.c.1.	The existing viewpoints on Marsh and Foster Islands are being maintained and the waterfront trail provides access to these viewpoints. The proposed trail repairs and improvements are to an existing facility.
Development nonconforming to development standards	23.60A.124	D. Development located over water or in setbacks 1. Except as provided in subsection 23.60A.124.D.2, a development nonconforming to development standards because of its location over water, within the required shoreline setback, or within the residential shoreline setback may be maintained, repaired and structurally altered consistent with subsections 23.60A.124.F and 23.60A.124.G but is prohibited from being: a. Substantially improved except as provided in subsection 23.60A.124.I; b. Replaced, except as provided in subsection 23.60A.124.I; or c. Expanded in any manner that increases the extent of nonconformity or creates additional nonconformity, except as provided in subsections 23.60A.124.F and 23.60A.124.I, and as otherwise required by law, if necessary to improve access for the elderly or disabled, or to provide regulated public access.	The existing trail is impassable in the summer months and sections of the bridges at the canoe and kayak crossing are too steep to meet accessibility standards under the ADA. Proposed improvements to the trail and bridges will make the whole trail accessible to people of all ages and abilities in compliance with ADA.

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								WATERFRONT TRAIL PROJECT	DRAWN <u>CW</u>	SHEET <u>2</u> OF <u>31</u>	
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									ORDINANCE NO. _____		G-2
									SPECIFICATION NO. _____		
									SCALE <u>AS SHOWN</u>		
								ZONING CODE SUMMARY			



- LEGEND:
- PROJECT BOUNDARY
 - EXISTING CONTOURS
 - EXISTING TREES
 - EXISTING WETLAND



- NOTES:
- HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83, U.S. FEET.
 - VERTICAL DATUM: NAVD88
 - THIS SHEET LAYOUT APPLIES TO EXISTING CONDITIONS PLANS (EC-X), TEMPORARY EROSION AND SEDIMENT CONTROL PLANS (T-X), DEMOLITION AND CLEARING PLANS (D-X) AND PLANTING AND CONSTRUCTION MATERIALS PLANS (L-X).

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Also, verify all underground utilities not located by the
811 service by using a commercial location service and
call SPR Inspection Request Line (206) 684-7034.

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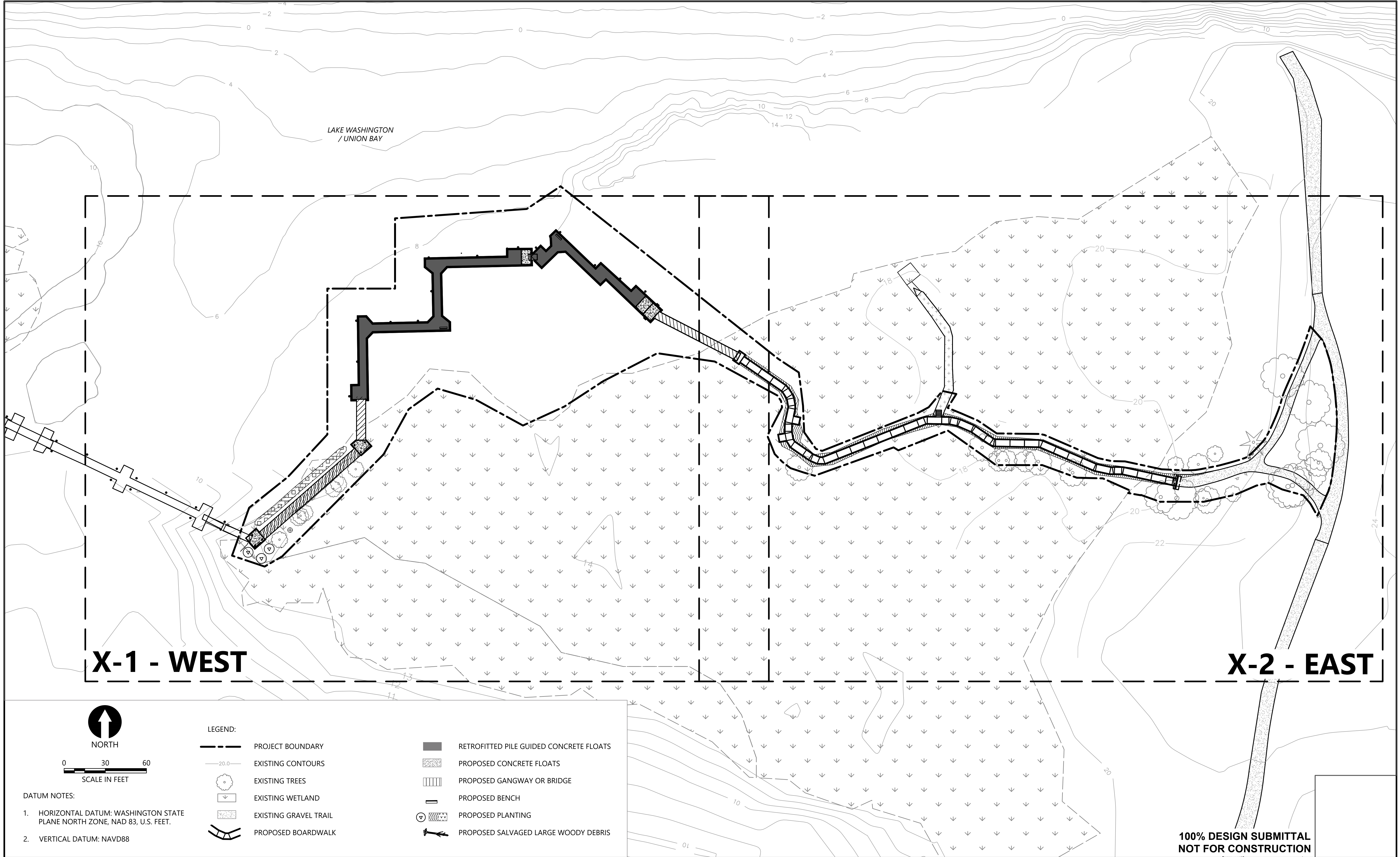
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WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
SHEET LAYOUT KEY PLAN

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ORDINANCE NO.
SPECIFICATION NO.
SCALE AS SHOWN

DATE OCTOBER 2020
SHEET 3 of 31
G-3



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WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
COMPOSITE SITE PLAN

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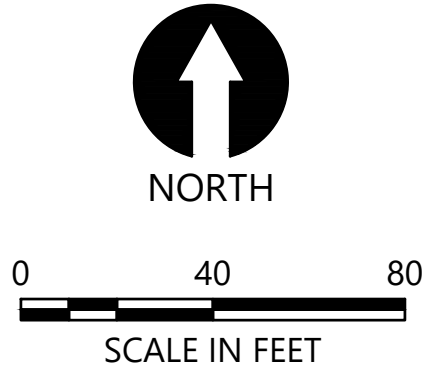
DATE OCTOBER 2020
SHEET 4 OF 31
G-4



- LEGEND:
- PROJECT BOUNDARY
 - EXISTING CONTOURS
 - EXISTING TREES
 - EXISTING WETLAND
 - UPLAND MATERIAL DELIVERY ACCESS (TRAIL USE ONLY)
 - POTENTIAL STAGING AND STOCKPILE AREA (SEE NOTE 4)
 - 6" CHAINLINK CONSTRUCTION FENCING

- CONSTRUCTION STAGING AND ACCESS NOTES:
- CONTRACTOR SHALL KEEP FOSTER ISLAND TRAIL OPEN TO PUBLIC ACCESS THROUGHOUT CONSTRUCTION.
 - THIS PROJECT PRIMARILY USES WATER-BASED CONSTRUCTION ACCESS USING LAKE WASHINGTON, UNION BAY, AND THE MONTLAKE CUT.
 - A COMBINATION OF BARGE-BASED ACCESS AND USE OF SOME LIGHT, LAND-BASED EQUIPMENT IS ANTICIPATED TO ACCESS THE ENTIRE SITE.
 - STAGING AND STOCKPILE AREAS SHOWN ARE APPROXIMATE; CONTRACTOR SHALL SUBMIT TO OWNER A CONSTRUCTION ACCESS AND STAGING PLAN TO OBTAIN APPROVAL FROM OWNER PRIOR TO MOBILIZATION.
 - CONTRACTOR SHALL NOT DISTURB EXISTING VEGETATION IN STAGING AREAS WITHOUT PRIOR APPROVAL OF OWNER.
 - CONTRACTOR'S STAGING AND STOCKPILING ACTIVITIES SHALL NOT DISTURB EXISTING WETLANDS.
 - CONTRACTOR SHALL PROTECT THE PUBLIC FROM ALL CONSTRUCTION ACTIVITIES AND SHALL PREVENT PUBLIC ACCESS TO STAGING AND WORK AREAS.
 - CONTRACTOR MAY HAVE THE OPTION TO INSTALL UP TO TWO (2) TEMPORARY PILES TO FACILITATE MOORING WATER-BASED CONSTRUCTION EQUIPMENT. CONTRACTOR SHALL COORDINATE WITH OWNER PRIOR TO MOBILIZATION IF TEMPORARY PILES ARE TO BE REQUESTED. ANY PILES INSTALLED TO SUPPORT WATER-BASED ACCESS SHALL BE REMOVED BY THE CONTRACTOR PRIOR TO SUBSTANTIAL COMPLETION.
 - CONTRACTOR SHALL NOT RESTORE STAGING AREA PRIOR TO SUBSTANTIAL COMPLETION. ALL EQUIPMENT AND MATERIALS SHALL BE REMOVED PRIOR TO SUBSTANTIAL COMPLETION, AND STAGING AREA SHALL BE RESTORED TO ITS PRE-PROJECT CONDITION.
 - ANTICIPATED LAKE WASHINGTON WATER SURFACE ELEVATIONS 16.18 TO 18.78 FEET NAVD88 DURING CONSTRUCTION.

- DATUM NOTES:
- HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83, U.S. FEET.
 - VERTICAL DATUM: NAVD88



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WWW.CALL811.COM

Also, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR Inspection Request Line (206) 684-7034.

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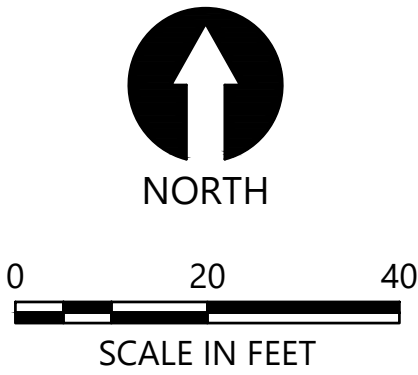
WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
CONSTRUCTION ACCESS
AND STAGING PLAN

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DATE OCTOBER 2020
SHEET 5 of 31
G-5



- LEGEND:
- PROJECT BOUNDARY
 - EXISTING CONTOURS
 - EXISTING WETLAND
 - EXISTING WOODCHIP TRAIL WITH TIMBER EDGING
 - EXISTING GRAVEL TRAIL
 - EXISTING CONCRETE OVERWATER STRUCTURE
 - EXISTING GRIP STRUT PATH
 - EXISTING WOOD RAILING
 - EXISTING TREES
 - EXISTING IN-WATER PILES
 - EXISTING SIGNS
 - EXISTING BENCHES
 - LANDSCAPE TIMBERS (ABANDONED TRAIL STRUCTURE)



SURVEY AND DATUM NOTES:

- HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83, U.S. FEET.
- VERTICAL DATUM: NAVD88
- ORDINARY HIGH WATER LEVEL IS 22' (USACE DATUM). USING THE USACE CONVERSION FACTOR OF -3.22 FOR NAVD 88, THE ORDINARY HIGH WATER ELEVATION IS 18.78' NAVD 88.
- NO EXISTING UTILITIES IN PROJECT AREA HAVE BEEN IDENTIFIED BY THE SURVEYOR. CONTRACTOR SHALL VERIFY IF BURIED UTILITIES ARE PRESENT.
- SOURCE OF SURVEY: THOMAS S. BARGER, P.L.S., SEATTLE PARKS AND RECREATION SURVEY CREW (TRAIL CORRIDOR), DATED 5/4/2017.
- ADDITIONAL DATA OUTSIDE TRAIL CORRIDOR OBTAINED FROM WSDOT FOR SR520. SEE SHEET EC-3 FOR ADDITIONAL BOTTOM SOUNDINGS AND DEBRIS SURVEY.

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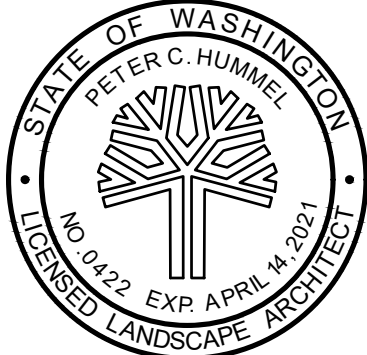
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WASHINGTON PARK ARBORETUM

WATERFRONT TRAIL PROJECT

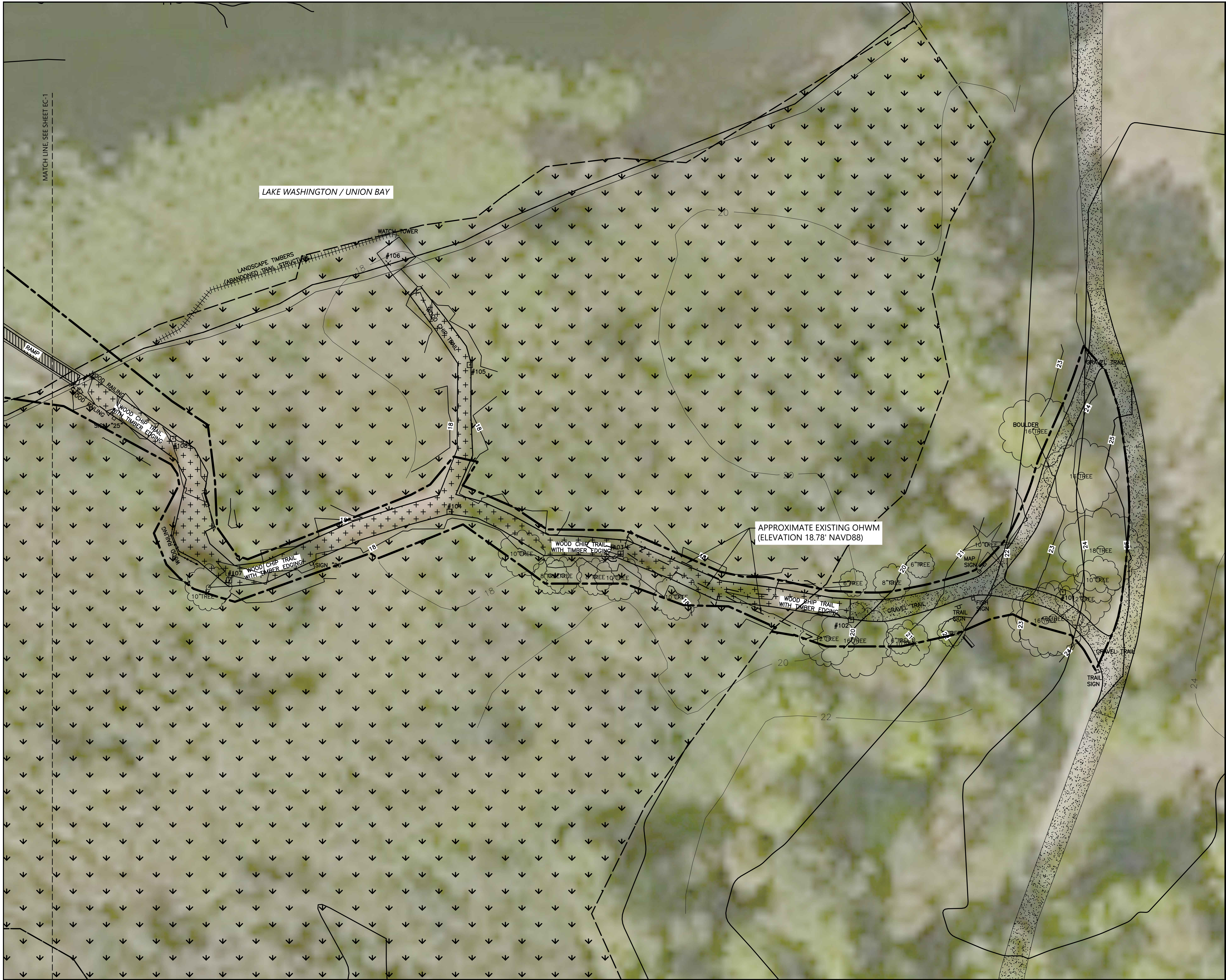
EXISTING CONDITIONS PLAN
(1 OF 2) - WEST

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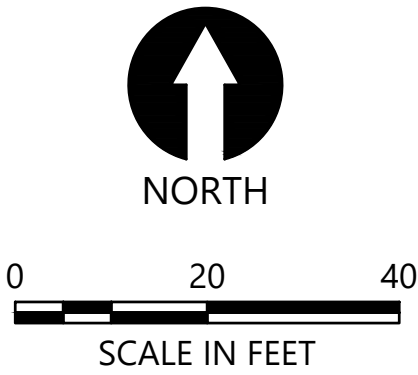
DATE OCTOBER 2020

SHEET 6 OF 31

EC-1



- LEGEND:
- PROJECT BOUNDARY
 - EXISTING CONTOURS
 - EXISTING WETLAND
 - EXISTING WOODCHIP TRAIL WITH TIMBER EDGING
 - EXISTING GRAVEL TRAIL
 - EXISTING CONCRETE OVERWATER STRUCTURE
 - EXISTING GRIP STRUT PATH
 - EXISTING WOOD RAILING
 - EXISTING TREES
 - EXISTING SIGNS
 - EXISTING BENCHES
 - LANDSCAPE TIMBERS (ABANDONED TRAIL STRUCTURE)
 - APPROXIMATE EXISTING OHWM (SEE NOTE 3)



- SURVEY AND DATUM NOTES:
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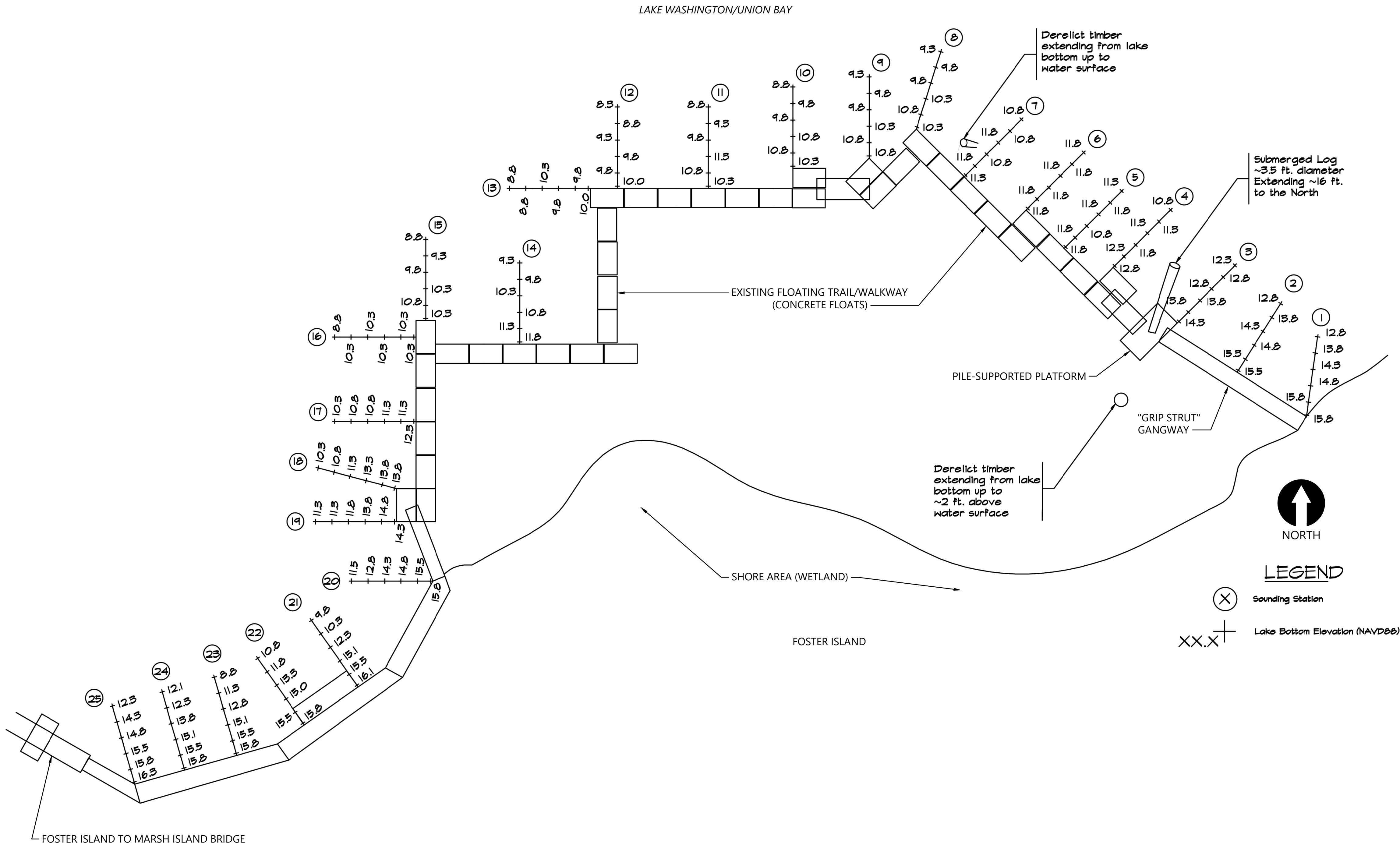
WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
EXISTING CONDITIONS PLAN
(2 OF 2) - EAST

DESIGNED	N/A
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SPECIFICATION NO.	
SCALE	AS SHOWN

DATE OCTOBER 2020

SHEET 7 OF 31

EC-2



LAKE BOTTOM SOUNDINGS/ELEVATIONS						
STATION	MUDLINE ELEVATIONS NORTH OF WALKWAY (NAVD88, ft.)					
	0 ft. North	5 ft. North	10 ft. North	15 ft. North	20 ft. North	25 ft. North
1	15.8	15.8	14.8	14.3	13.8	12.8
2	15.5	15.3	14.8	14.3	13.8	12.8
3	14.3	13.8	13.8	12.8	12.8	12.3
4	12.8	12.3	11.8	11.3	11.3	10.8
5	11.8	11.8	10.8	11.8	11.8	11.3
6	11.8	11.8	11.8	11.8	11.8	11.8
7	11.3	11.8	10.8	11.8	10.8	10.8
8	10.3	10.8	10.3	9.8	9.8	9.3
9	10.8	10.8	10.3	9.8	9.8	9.3
10	10.3	10.8	10.8	9.8	9.8	8.8
11	10.3	10.8	11.3	9.8	9.3	8.8
12	10.0	9.8	9.8	9.3	8.8	8.3
13	10.0	9.8	9.8	10.3	8.8	8.8
14	11.8	11.3	10.8	10.3	9.8	9.3
15	10.3	10.8	10.3	9.8	9.3	8.8
16	10.3	10.3	10.3	10.3	10.3	8.8
17	12.3	11.3	11.3	10.8	10.8	10.3
18	13.8	13.8	13.3	11.3	10.8	10.3
19	14.3	14.8	13.8	11.8	11.3	11.3
20	15.8	15.5	14.8	14.3	12.8	11.5
21	16.1	15.5	15.1	12.3	10.3	9.8
22	15.8	15.5	15.0	13.3	11.8	10.8
23	15.8	15.5	15.1	12.8	11.3	8.8
24	15.8	15.5	15.1	13.8	12.3	12.1
25	16.3	15.8	15.5	14.8	14.3	12.3

- NOTES:
- VERTICAL DATUM: NAVD88
 - DRAWING IS NOT TO SCALE.
 - PLAN AND TABLE PROVIDED BY ECHELON ENGINEERING, INC., DATED JANUARY 24, 2020. SEE SPECIFICATION INDEX FOR FULL ECHELON REPORT.

100% DESIGN SUBMITTAL
NOT FOR CONSTRUCTION

>>>>CAUTION - CALL 811<<<<
UTILITY NOTIFICATION CENTER
BEFORE YOU DIG!
WWW.CALL811.COM

Also, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR Inspection Request Line (206) 684-7034.

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NO.	REVISION -- AS BUILT	DATE

REVIEWED: _____ DATE _____
PARK ENGINEER
All work done in accordance with the City of Seattle Standard Plans and Specifications in effect on the date shown above, and supplemented by Special Provisions.



WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
BOTTOM SOUNDINGS AND SUBMERGED OBSTRUCTIONS SURVEY

DESIGNED N/A
DRAWN CH
CHECKED PH
ORDINANCE NO. _____
SPECIFICATION NO. _____
SCALE AS SHOWN

DATE OCTOBER 2020

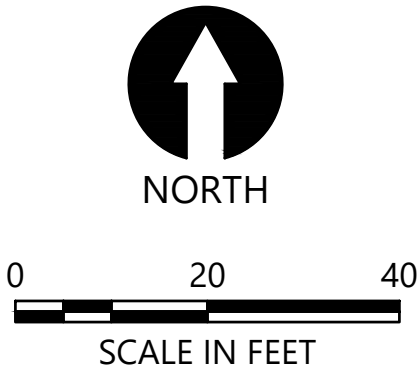
SHEET 8 OF 31

EC-3



- LEGEND:
- PROJECT BOUNDARY
 - EXISTING CONTOURS
 - EXISTING TREES
 - EXISTING WETLAND
 - WATTLES/COMPOST SOCK
 - SF SILT FENCING
 - TC IN-WATER FLOATING TURBIDITY CURTAIN
 - TREE PROTECTION FENCING
 - CHAINLINK CONSTRUCTION FENCING

- TESC NOTES:
- SEE SHEET T-3 FOR STANDARD TESC NOTES.
 - DEWATERING WITHIN THE PROJECT LIMITS IS PROHIBITED DUE TO PRESENCE OF WETLAND.
 - CONTRACTOR SHALL CONTAIN TEMPORARY STOCKPILES WITH SILT FENCE OR EQUIVALENT TESC MEASURE.
 - ALL TESC MEASURES SHALL BE INSPECTED DAILY BY THE CONTRACTOR.
 - CONTRACTOR SHALL MAINTAIN AND REPAIR ALL TESC MEASURES AS NEEDED THROUGHOUT THE DURATION OF THE WORK.
 - CONTRACTOR SHALL REMOVAL ALL TESC MEASURES AND RESTORE AREAS WHERE TESC WAS USED TO PRE-PROJECT CONDITIONS UNLESS OTHERWISE APPROVED BY ENGINEER.
 - DRAWINGS DEPICT ANTICIPATED LOCATIONS WHERE TESC MEASURES ARE LIKELY TO BE NEEDED. CONTRACTOR SHALL DETERMINE ACTUAL LOCATIONS WHERE TESC WILL BE INSTALLED AND SHALL ADD TESC MEASURES AS NECESSARY, AT NO ADDITIONAL COST TO PARKS/OWNER, TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE WORK AREA.



- DATUM NOTES:
- HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83, U.S. FEET.
 - VERTICAL DATUM: NAVD88

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NO.	REVISION -- AS BUILT	DATE

REVIEWED: _____ DATE _____

PARK ENGINEER

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WASHINGTON PARK ARBORETUM

WATERFRONT TRAIL PROJECT

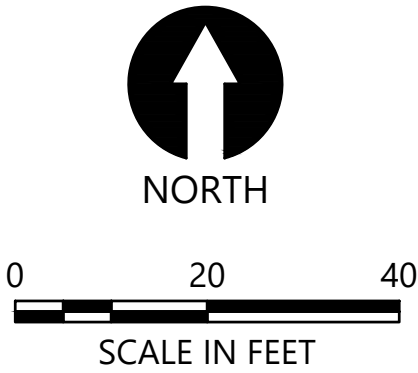
TEMPORARY EROSION AND SEDIMENT CONTROL PLAN (1 OF 2) - WEST

DESIGNED PH	DATE OCTOBER 2020
DRAWN BS/CH	SHEET 9 OF 31
CHECKED PH	T-1
ORDINANCE NO.	
SPECIFICATION NO.	
SCALE AS SHOWN	



- LEGEND:
- PROJECT BOUNDARY
 - EXISTING CONTOURS
 - EXISTING TREES
 - EXISTING WETLAND
 - WATTLES/COMPOST SOCK
 - SILT FENCING
 - IN-WATER FLOATING TURBIDITY CURTAIN
 - TREE PROTECTION FENCING
 - CHAINLINK CONSTRUCTION FENCING

- TESC NOTES:
- SEE SHEET T-3 FOR STANDARD TESC NOTES.
 - DEWATERING WITHIN THE PROJECT LIMITS IS PROHIBITED DUE TO PRESENCE OF WETLAND.
 - CONTRACTOR SHALL CONTAIN TEMPORARY STOCKPILES WITH SILT FENCE OR EQUIVALENT TESC MEASURE.
 - ALL TESC MEASURES SHALL BE INSPECTED DAILY BY THE CONTRACTOR.
 - CONTRACTOR SHALL MAINTAIN AND REPAIR ALL TESC MEASURES AS NEEDED THROUGHOUT THE DURATION OF THE WORK.
 - CONTRACTOR SHALL REMOVAL ALL TESC MEASURES AND RESTORE AREAS WHERE TESC WAS USED TO PRE-PROJECT CONDITIONS UNLESS OTHERWISE APPROVED BY ENGINEER.
 - DRAWINGS DEPICT ANTICIPATED LOCATIONS WHERE TESC MEASURES ARE LIKELY TO BE NEEDED. CONTRACTOR SHALL DETERMINE ACTUAL LOCATIONS WHERE TESC WILL BE INSTALLED AND SHALL ADD TESC MEASURES AS NECESSARY, AT NO ADDITIONAL COST TO PARKS/OWNER, TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE WORK AREA.



- DATUM NOTES:
- HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83, U.S. FEET.
 - VERTICAL DATUM: NAVD88

100% DESIGN SUBMITTAL
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NO.	REVISION -- AS BUILT	DATE

REVIEWED: _____ DATE _____
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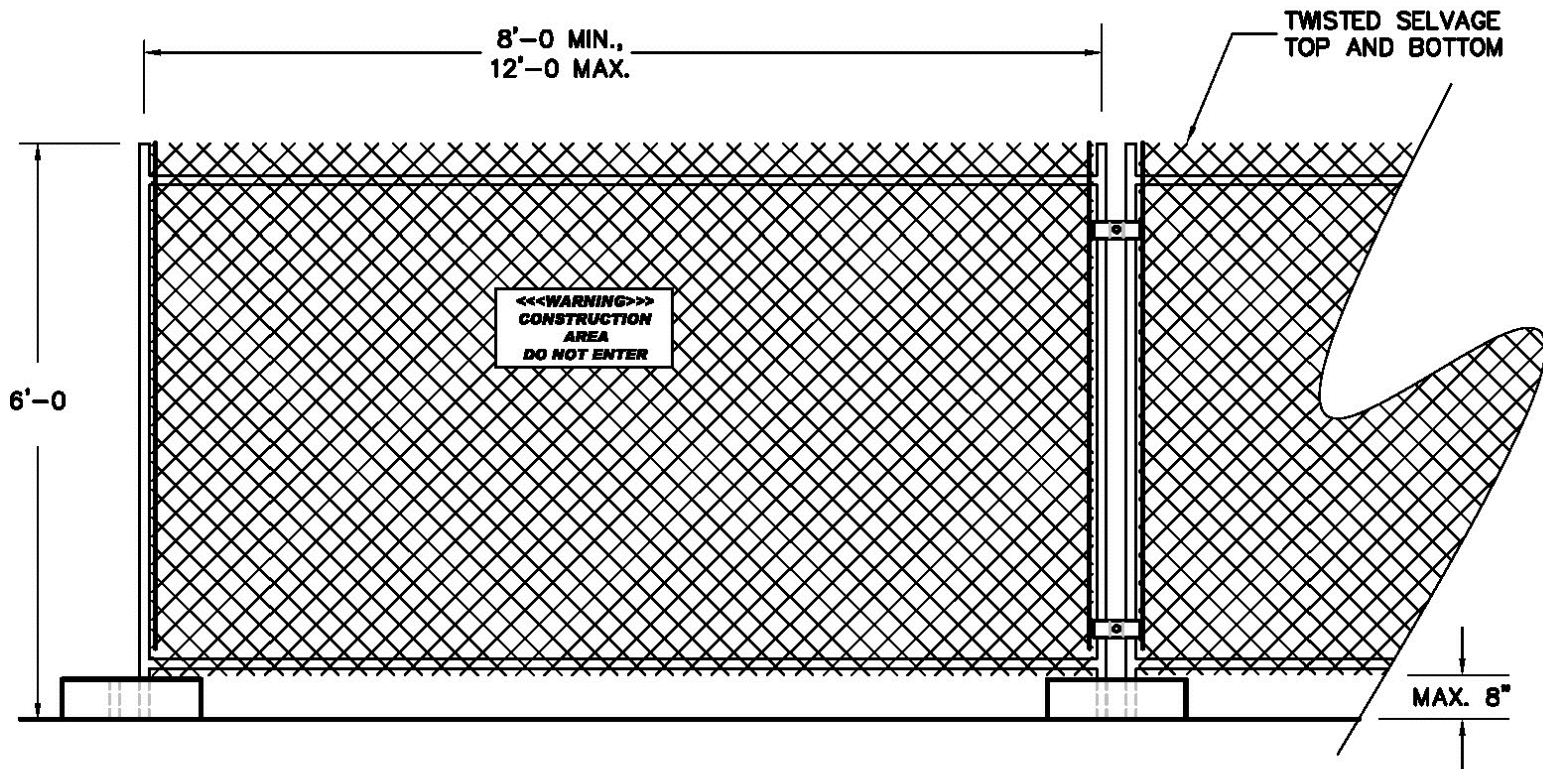
WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
TEMPORARY EROSION AND SEDIMENT CONTROL PLAN (2 OF 2) - EAST

DESIGNED PH
DRAWN BS/CH
CHECKED PH
ORDINANCE NO.
SPECIFICATION NO.
SCALE AS SHOWN

DATE OCTOBER 2020

SHEET 10 OF 31

T-2



NOTES:
1. CHAIN LINK FABRIC TO BE MIN. 11 GAUGE, GALVANIZED. NO RUSTED OR EXCESSIVELY MALFORMED FABRIC.
2. FENCE BASES SHALL BE OF SUFFICIENT WEIGHT and/or SPREAD TO ADEQUATELY SUPPORT EACH PANEL.
3. PANEL-TO-PANEL CONNECTIONS SHALL BE MADE AT A MIN. TWO LOCATIONS PER CONNECTION UNLESS OTHERWISE APPROVED.
4. PROVIDE CONSTRUCTION WARNING SIGNAGE 50' O.C. ALONG FENCING INSTALLATION.

1 6' CHAINLINK TEMPORARY CONSTRUCTION FENCING
T-1 SCALE: NTS

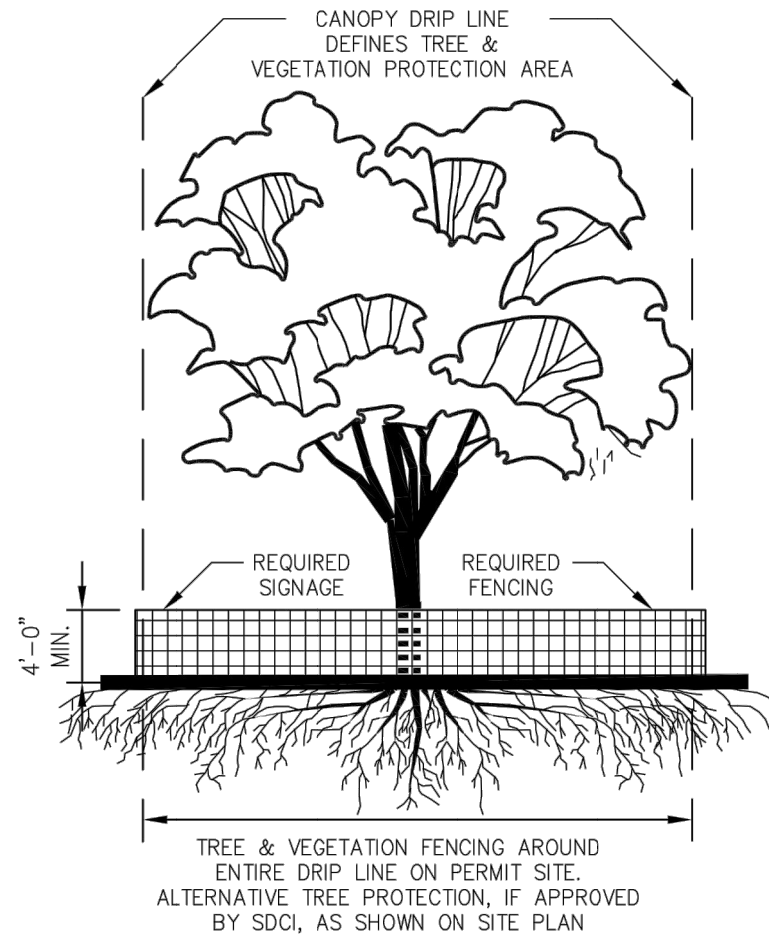
TREE & VEGETATION PROTECTION

TREE PROTECTION FENCING AND SIGN

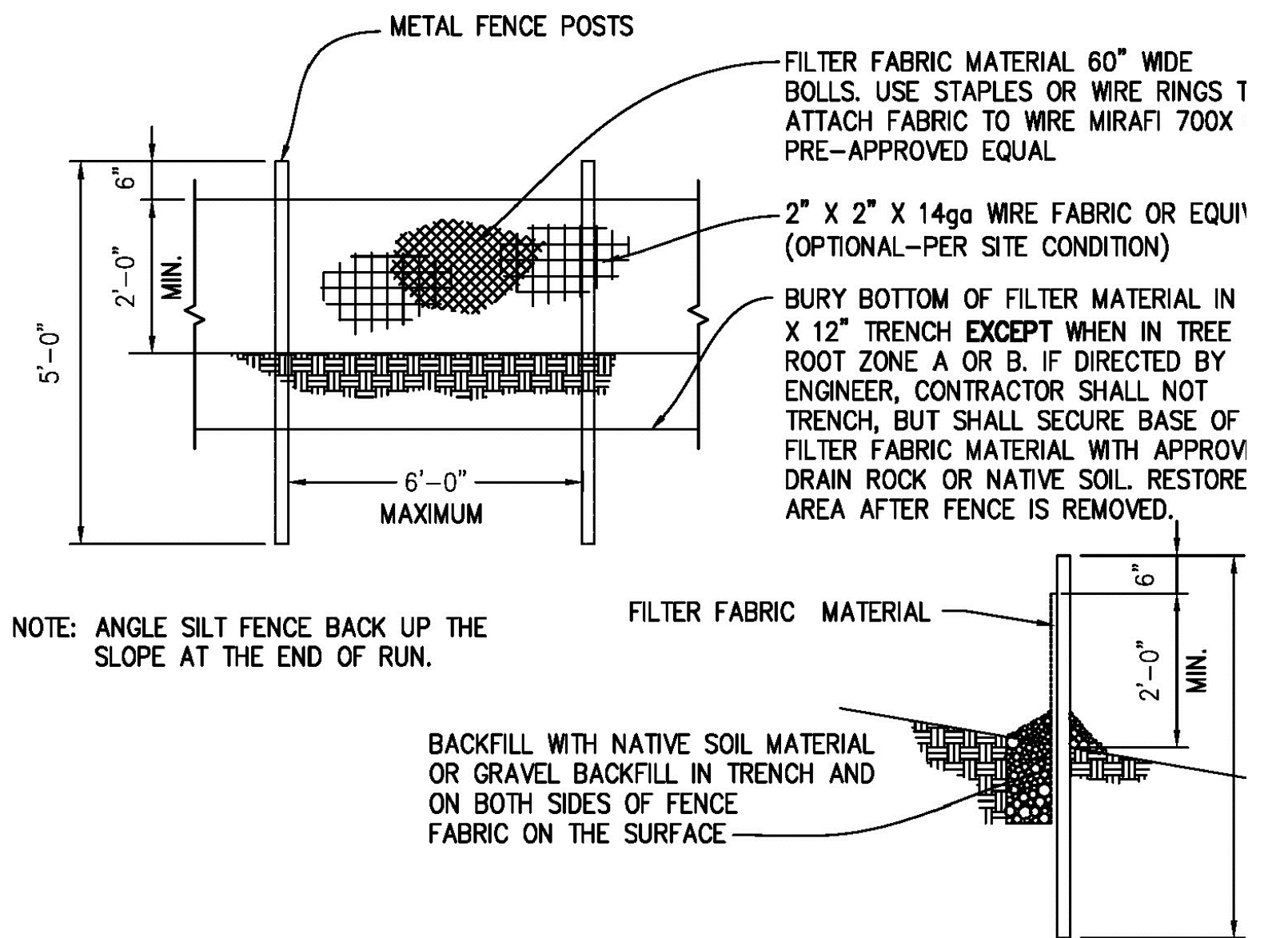
1. CHAIN LINK, WIRE MESH, OR SIMILAR OPEN RIGID MATERIAL (NO PLYWOOD)
2. MUST BE INSTALLED PRIOR TO DEMOLITION OR GROUND DISTURBANCE
3. KEPT IN PLACE FOR THE DURATION OF CONSTRUCTION
4. NO SOIL DISTURBANCE OR ACTIVITY ALLOWED WITHIN FENCED AREA: MATERIAL STORAGE/STOCKPILING, PARKING, EXCAVATION, DUMPING, OR WASHING
5. MODIFICATIONS OF THESE REQUIREMENTS BY APPROVAL OF SDCI PLANNER ONLY
6. IF ROOTS GREATER THAN 2 INCH FOUND OUTSIDE OF FENCING, PROTECT BY HAND EXCAVATION AND, IF NECESSARY, CUT CLEANLY AND KEEP MOIST
7. USE 3 INCHES OR DEEPER WOOD CHIP MULCH OUTSIDE FENCED AREAS TO PROTECT FEEDER ROOTS

VEGETATION PROTECTION

1. ORANGE MESH OR SIMILAR OPEN MATERIAL
2. MINIMIZE CONSTRUCTION ZONE
3. PROTECT VEGETATION OUTSIDE CONSTRUCTION ZONE WITH FENCING AS SHOWN
4. USE 3 INCHES OR DEEPER WOOD CHIP MULCH OUTSIDE FENCED AREAS TO PROTECT FEEDER ROOTS



2 TREE PROTECTION FENCING
T-1 SCALE: NTS
NOTE: DETAIL FROM CITY OF SEATTLE DEPARTMENT OF CONSTRUCTION AND INSPECTION



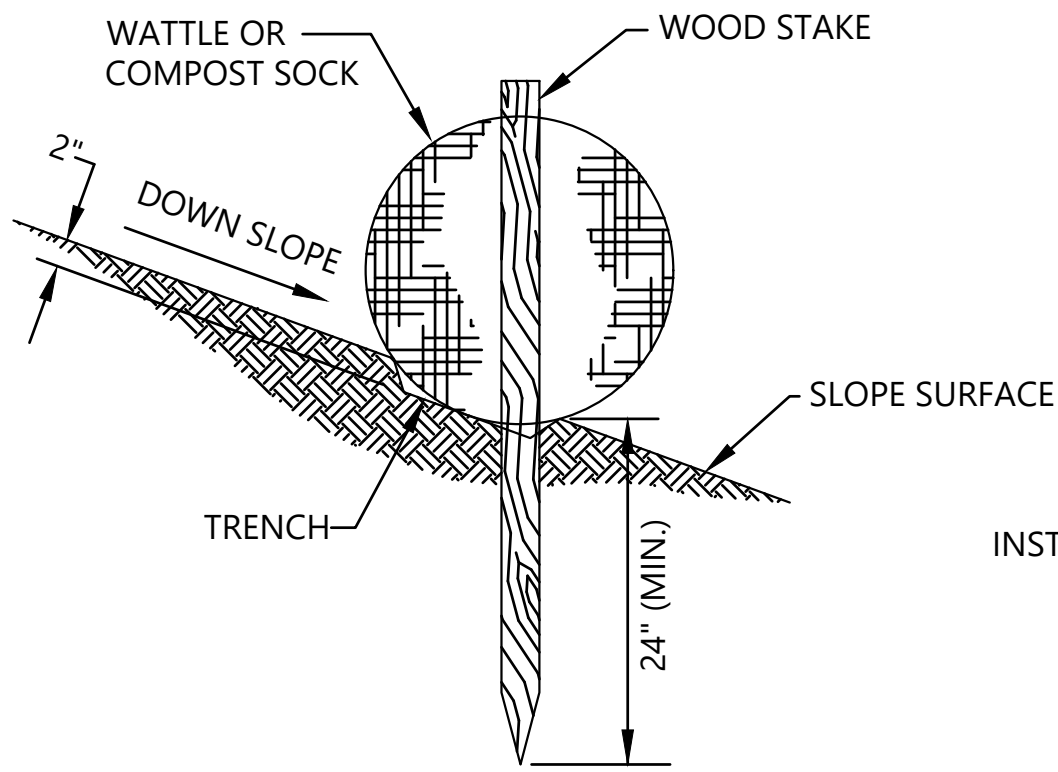
NOTE: ANGLE SILT FENCE BACK UP THE SLOPE AT THE END OF RUN.

PURPOSE: TO INTERCEPT & DETAIN SMALL AMOUNTS OF SEDIMENT UNDER SHEET FLOW CONDITIONS FROM DISTURBED AREAS DURING CONSTRUCTION AND TO REDUCE THE VELOCITY OF SHEET FLOWS.

3 SILT FENCING
T-1 SCALE: NTS

CONSTRUCTION STORMWATER CONTROL (CSC) GENERAL NOTES

1. A FIRST GROUND DISTURBANCE INSPECTION IS REQUIRED PRIOR TO START OF WORK ON ALL SITES WITH LAND DISTURBING ACTIVITY.
2. SCHEDULE A FIRST GROUND DISTURBANCE INSPECTION FOR AN ISSUED BUILDING PERMIT AT 206-684-8900 OR ONLINE AT WWW.SEATTLE.GOV/DPD/PERMITS/INSPECTIONS/
3. THE APPLICANT SHALL DESIGNATE AN EROSION AND SEDIMENT CONTROL (ESC) SUPERVISOR WHO SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF EROSION CONTROL BEST MANAGEMENT PRACTICES (BMPS). FOR LARGE CONSTRUCTION PROJECTS, THE ESC SUPERVISOR SHOULD BE A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL). PROVIDE THE NAME AND PHONE NUMBER OF THE ESC SUPERVISOR TO THE SITE INSPECTOR AT THE FIRST GROUND DISTURBANCE INSPECTION.
4. BMPS SHALL BE INSTALLED PRIOR TO STARTING CONSTRUCTION TO ENSURE SEDIMENT-LADEN WATER DOES NOT LEAVE THE PROJECT SITE OR ENTER ROADSIDE DITCHES, STORM DRAINS, SURFACE WATERS, OR WETLANDS.
5. THE BMPS INCLUDED IN THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. THE APPLICANT IS RESPONSIBLE FOR ENSURING THAT BMPS ARE MODIFIED AS NEEDED FOR UNEXPECTED STORM EVENTS OR OTHER UNFORESEEN CIRCUMSTANCES, AND TO ACCOUNT FOR CHANGING SITE CONDITIONS.
6. ANY AREAS OF DISTURBED SOIL THAT WILL NOT BE WORKED FOR TWO CONSECUTIVE DAYS DURING THE WET SEASON (OCT 1 TO APRIL 30) OR SEVEN DAYS DURING THE DRY SEASON (MAY 1 TO SEPT 30) SHALL BE IMMEDIATELY STABILIZED WITH APPROVED BMPS METHODS (E.G. STRAW, MULCH, PLASTIC COVERING, COLD MIX, ETC.)
7. GRADING AND/OR SOIL DISTURBING ACTIVITIES MAY BE LIMITED OR PROHIBITED FOR CERTAIN SITES SUBJECT TO ECA STANDARDS (I.E. ECA STEEP SLOPES, LANDSLIDE PRONE AREAS, ETC.) BETWEEN OCTOBER 31ST AND APRIL 1ST. IF NOTED IN THE GEOTECHNICAL SPECIAL INSPECTIONS REQUIREMENTS, A GRADING SEASON EXTENSION LETTER (GSEL) ISSUED BY SDCI IS REQUIRED FOR ALL GRADING AND/OR SOIL DISTURBING ACTIVITIES DURING THIS PERIOD. THE GEOTECHNICAL SPECIAL INSPECTOR MUST SUBMIT ELECTRONIC APPLICATIONS FOR A GSEL USING THE SDCI PROJECT PORTAL. ALLOW FOUR TO SIX WEEKS FOR PROCESSING. FAILURE TO OBTAIN THE GSEL PRIOR TO OCTOBER 31 MAY RESULT IN A WORK STOPPAGE.
8. CITY STREETS AND SIDEWALKS SHALL BE KEPT CLEAN AT ALL TIMES. NO MATERIAL SHALL BE STORED ON CITY STREETS OR SIDEWALKS WITHOUT A STREET USE PERMIT FROM THE SEATTLE DEPARTMENT OF TRANSPORTATION (SDOT).
9. POLLUTION CONTROL MEASURES SHALL BE FOLLOWED TO ENSURE THAT NO LIQUID PRODUCTS OR CONTAMINATED WATER ENTERS ANY STORM DRAINAGE FACILITIES OR OTHERWISE LEAVES THE PROJECT SITE. ANY HAZARDOUS MATERIALS OR LIQUID PRODUCTS THAT HAVE THE POTENTIAL TO POLLUTE RUNOFF SHALL BE STORED AND DISPOSED OF PROPERLY.
10. ENSURE THAT WASHOUT FROM CONCRETE TRUCKS IS PERFORMED OFF-SITE OR IN DESIGNATED CONCRETE WASHOUT AREAS ONLY. DO NOT WASH OUT CONCRETE TRUCKS ONTO THE GROUND, OR TO STORM DRAINS OR OPEN DITCHES. DO NOT DUMP EXCESS CONCRETE ONSITE, EXCEPT IN DESIGNATED CONCRETE WASHOUT AREAS.
11. ALL AREAS OF DISTURBED SOIL SHALL BE FULLY STABILIZED WITH THE APPROPRIATE SOIL AMENDMENT AND COVER MEASURES AT COMPLETION OF THE PROJECT. TYPICAL COVER MEASURES INCLUDE LANDSCAPING OR HYDROSEED WITH MULCH.

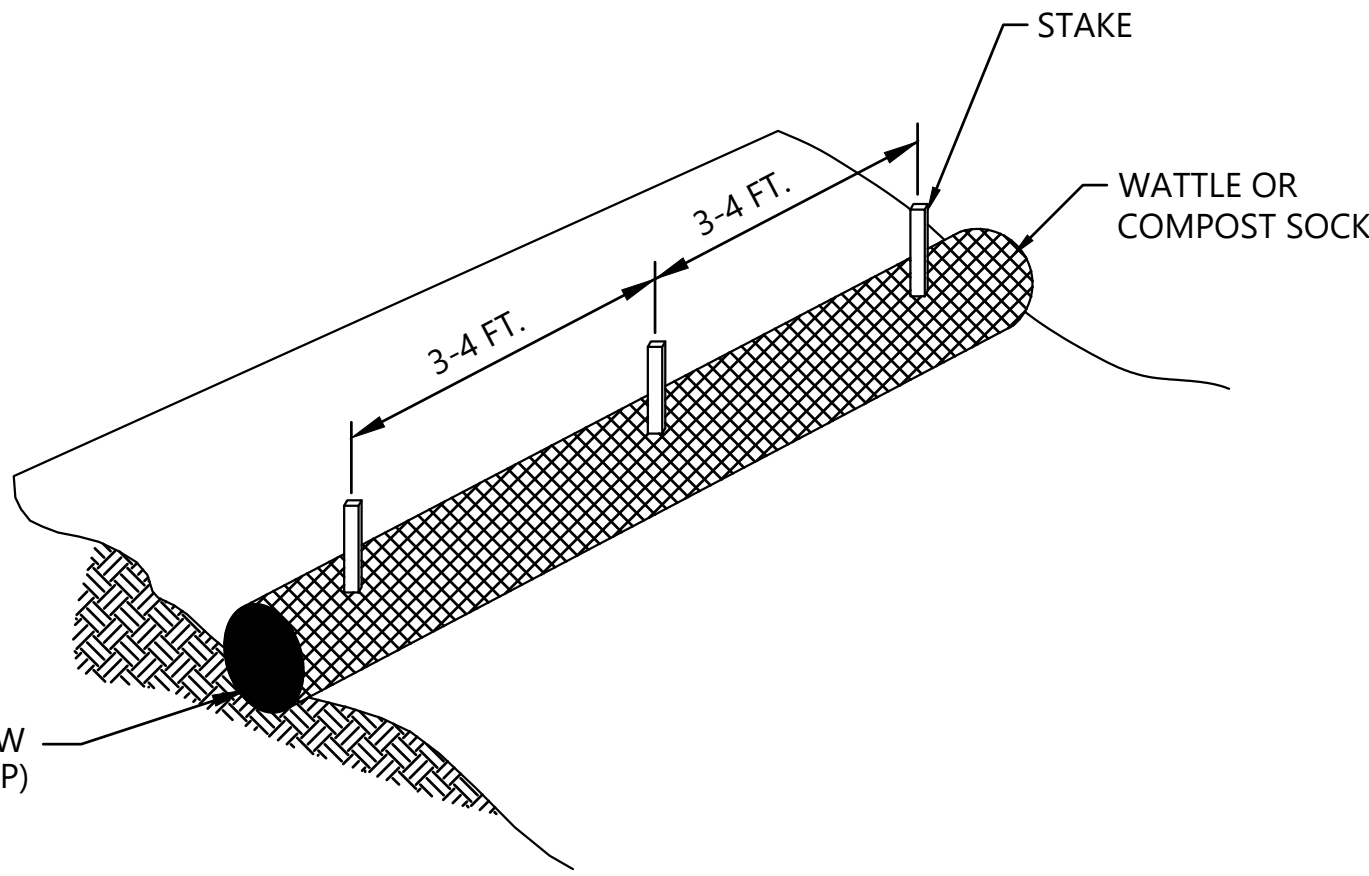


STAKE DETAIL
N.T.S.

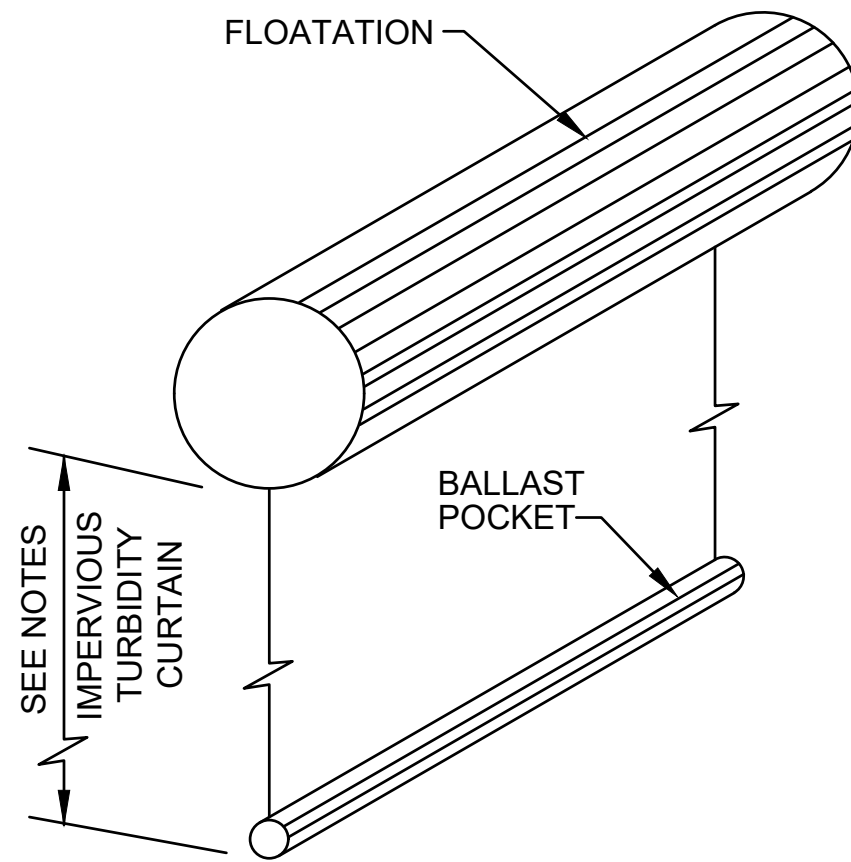
NOTES:

1. BEGIN AT THE LOCATION WHERE THE WATTLE OR COMPOST SOCK IS TO BE INSTALLED BY EXCAVATING A 2-3" DEEP X 9" WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UP-SLOPE FROM THE ANCHOR TRENCH.
2. PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UPHILL SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
3. SECURE THE WATTLE WITH 18-24" STAKES EVERY 3-4' AND WITH A STAKE ON EACH END. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE LEAVING AT LEAST 2-3" OF STAKE EXTENDING ABOVE THE WATTLE. STAKES SHOULD BE DRIVEN PERPENDICULAR TO SLOPE FACE.

4 WATTLES OR COMPOST SOCKS
T-1 SCALE: NTS



STRAW WATTLE INSTALLATION GUIDE
N.T.S.



NOTES:

1. AROUND PILE DRIVING AREAS AND EXISTING PILE REMOVAL AREAS, LENGTH OF CURTAIN SHALL EXTEND TO MUDLINE FOR ALL TIDE LEVELS.
2. ALL OTHER AREAS, WHERE DEBRIS FROM DEMOLITION WORK MAY EXIST, LENGTH OF CURTAIN SHALL BE 6 FEET.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE TURBIDITY CURTAIN TO MAINTAIN FUNCTIONALITY OF THE TURBIDITY CURTAIN THROUGHOUT ALL TIDAL CONDITIONS AND WEATHER EXPECTED DURING THE CONSTRUCTION PERIOD, AS REQUIRED BY THE APPROVED PROJECT PERMITS.
4. SEE SPECIFICATIONS FOR MATERIAL REQUIREMENTS.

5 IN-WATER FLOATING TURBIDITY CURTAIN
T-1 SCALE: NOT TO SCALE

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UTILITY NOTIFICATION CENTER
BEFORE YOU DIG!
WWW.CALL811.COM

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REVIEWED: _____ DATE _____
PARK ENGINEER

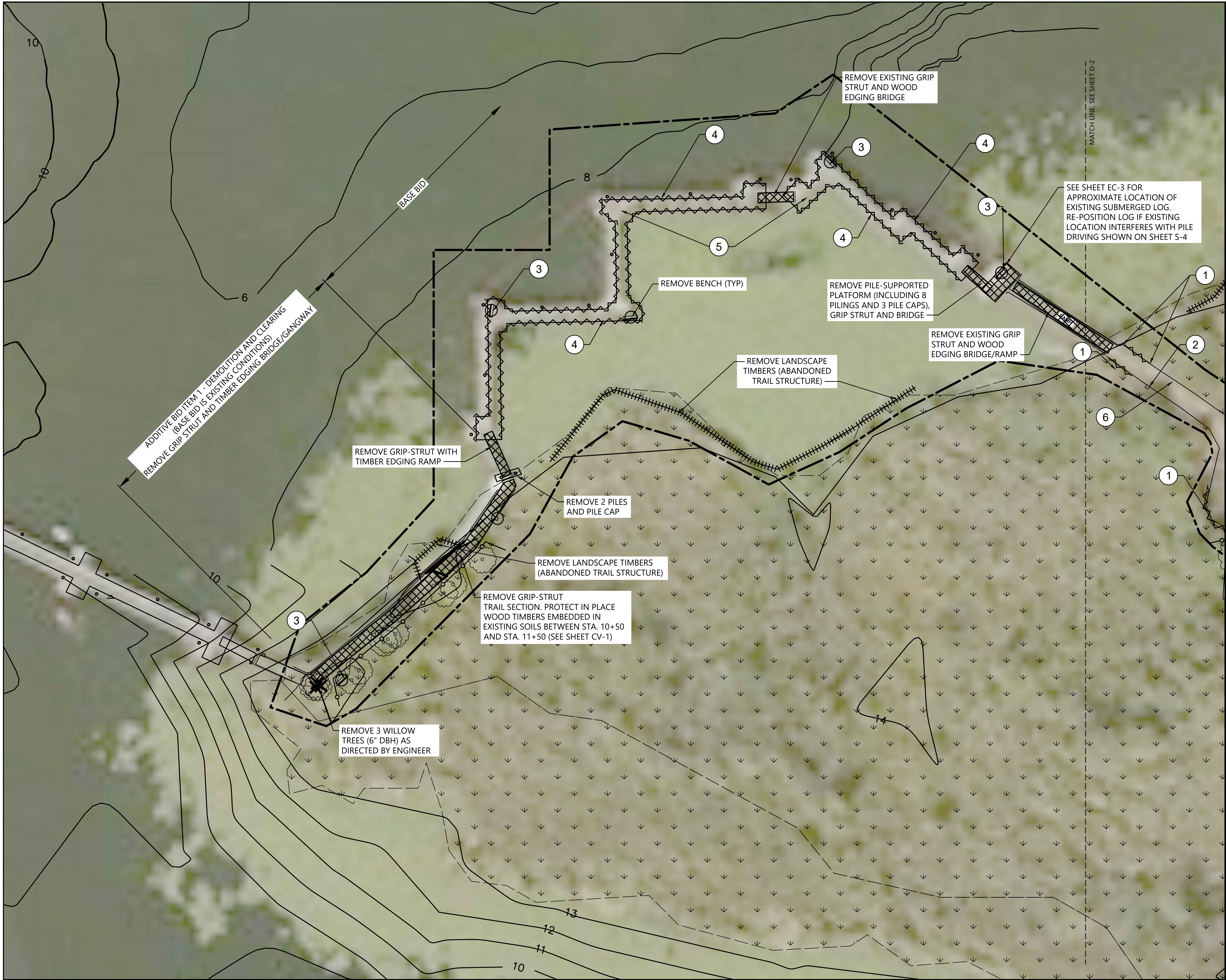
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WASHINGTON PARK ARBORETUM
DESIGNED PH
DRAWN BS/CH
CHECKED PH
ORDINANCE NO. _____
SPECIFICATION NO. _____
SCALE AS SHOWN
WATERFRONT TRAIL PROJECT
TESC AND TEMPORARY FENCING DETAILS AND NOTES

100% DESIGN SUBMITTAL
NOT FOR CONSTRUCTION

DATE	OCTOBER 2020
SHEET	11 of 31
T-3	



LEGEND:

- PROJECT BOUNDARY
- EXISTING CONTOURS
- EXISTING TREES
- EXISTING WETLAND
- REMOVE LANDSCAPE TIMBERS
- REMOVE PILING AND PILE CAP
- REMOVE STRUCTURE
- REMOVE GUARDRAIL
- REMOVE FEATURE
- REMOVE TREE
- TREE PROTECTION FENCING

DEMO KEY:

- 1 REMOVE WOOD HAND RAIL
- 2 REMOVE SIGN
- 3 REMOVE BENCH
- 4 REMOVE GUARDRAIL ON OVER-WATER STRUCTURE
- 5 PROTECT CONCRETE FLOATS TO REMAIN
- 6 PROTECT SAWDUST SURFACING AND TIMBER EDGING AT EXISTING TRAIL



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SCALE IN FEET

DATUM NOTES:

- HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83, U.S. FEET.
- VERTICAL DATUM: NAVD88

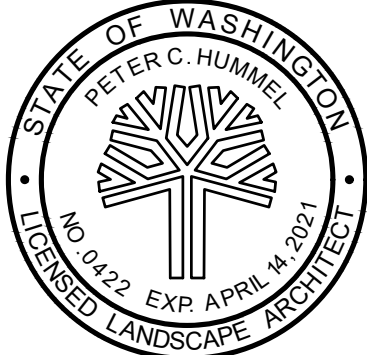
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WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
DEMOLITION AND CLEARING
PLAN (1 OF 2) - WEST

DESIGNED PH
DRAWN BS/CH
CHECKED PH
ORDINANCE NO.
SPECIFICATION NO.
SCALE AS SHOWN

DATE OCTOBER 2020

SHEET 12 OF 31

D-1



LEGEND:

- PROJECT BOUNDARY
- EXISTING CONTOURS
- EXISTING TREES
- EXISTING WETLAND
- REMOVE LANDSCAPE TIMBERS
- REMOVE PILING AND PILE CAP
- REMOVE STRUCTURE
- REMOVE GUARDRAIL
- REMOVE FEATURE
- REMOVE TREE
- TREE PROTECTION FENCING

DEMO KEY:

- 1 REMOVE WOOD HAND RAIL
- 2 REMOVE SIGN
- 3 REMOVE BENCH
- 4 REMOVE GUARDRAIL ON OVER-WATER STRUCTURE
- 5 PROTECT CONCRETE FLOATS TO REMAIN
- 6 PROTECT SAWDUST SURFACING AND TIMBER EDGING AT EXISTING TRAIL (SEE NOTE 3)
- 7 RESTORE CRUSHED ROCK TRAIL WITHIN PROJECT BOUNDARY



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SCALE IN FEET

GENERAL/DATUM NOTES:

- 1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83, U.S. FEET.
- 2. VERTICAL DATUM: NAVD88
- 3. EXISTING TRAIL WOOD CHIPS AND TIMBER EDGING ARE TO REMAIN. WOOD CHIPS SHALL BE GRADED SMOOTHLY TO SUPPORT BOARDWALK TRAIL WITH ADA-COMPLIANT SLOPES.

100% DESIGN SUBMITTAL
NOT FOR CONSTRUCTION

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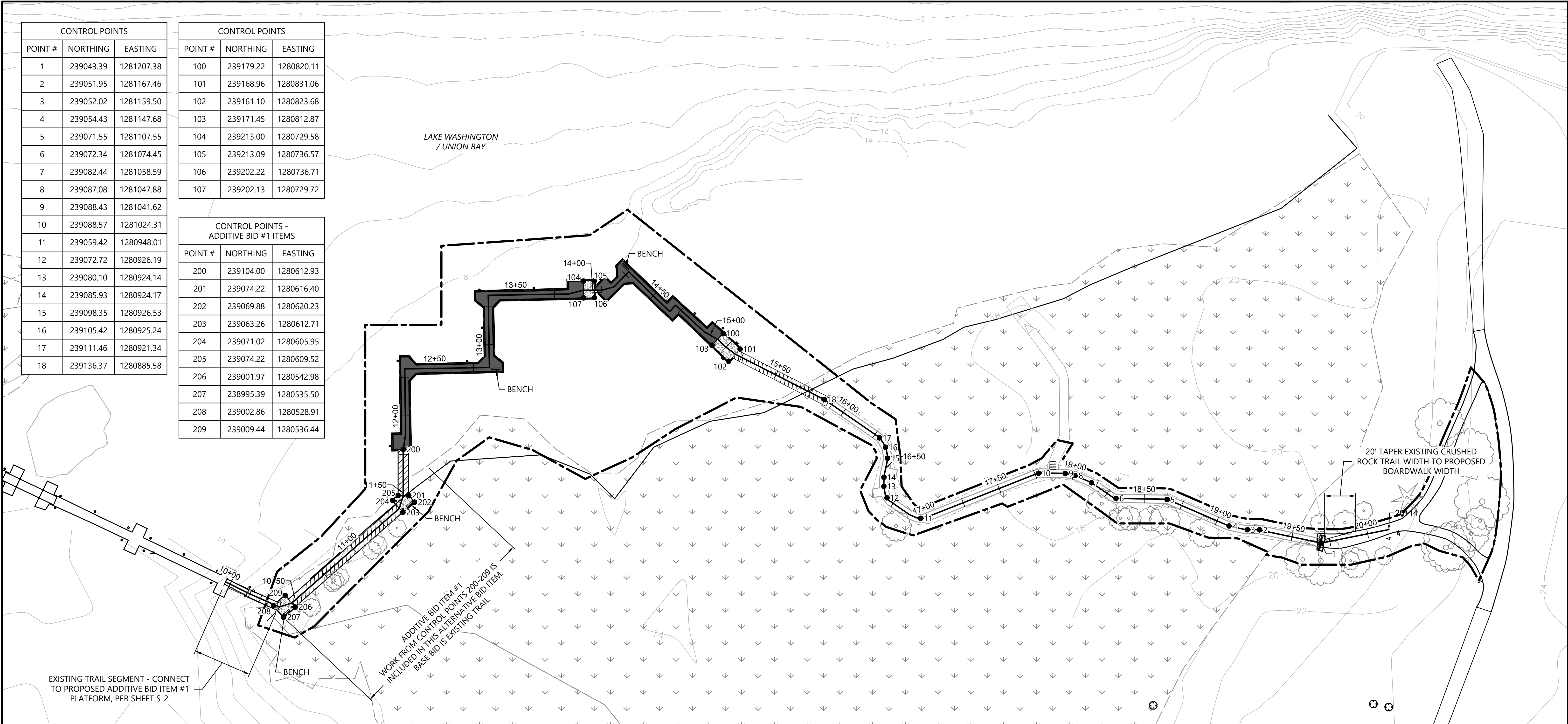
PARK ENGINEER DATE

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WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
DEMOLITION AND CLEARING
PLAN (2 OF 2) - EAST

DESIGNED PH	DATE OCTOBER 2020
DRAWN BS/CH	SHEET 13 OF 31
CHECKED PH	D-2
ORDINANCE NO.	
SPECIFICATION NO.	
SCALE AS SHOWN	



CONTROL POINTS		
POINT #	NORTHING	EASTING
1	239043.39	1281207.38
2	239051.95	1281167.46
3	239052.02	1281159.50
4	239054.43	1281147.68
5	239071.55	1281107.55
6	239072.34	1281074.45
7	239082.44	1281058.59
8	239087.08	1281047.88
9	239088.43	1281041.62
10	239088.57	1281024.31
11	239059.42	1280948.01
12	239072.72	1280926.19
13	239080.10	1280924.14
14	239085.93	1280924.17
15	239098.35	1280926.53
16	239105.42	1280925.24
17	239111.46	1280921.34
18	239136.37	1280885.58

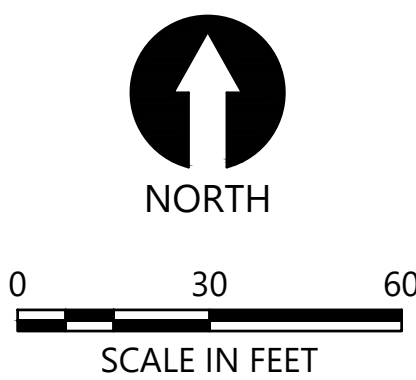
CONTROL POINTS		
POINT #	NORTHING	EASTING
100	239179.22	1280820.11
101	239168.96	1280831.06
102	239161.10	1280823.68
103	239171.45	1280812.87
104	239213.00	1280729.58
105	239213.09	1280736.57
106	239202.22	1280736.71
107	239202.13	1280729.72

CONTROL POINTS - ADDITIVE BID #1 ITEMS		
POINT #	NORTHING	EASTING
200	239104.00	1280612.93
201	239074.22	1280616.40
202	239069.88	1280620.23
203	239063.26	1280612.71
204	239071.02	1280605.95
205	239074.22	1280609.52
206	239001.97	1280542.98
207	238995.39	1280535.50
208	239002.86	1280528.91
209	239009.44	1280536.44

EXISTING TRAIL SEGMENT - CONNECT
TO PROPOSED ADDITIVE BID ITEM #1
PLATFORM, PER SHEET S-2

ADDITIVE BID ITEM #1
WORK FROM CONTROL POINTS 200-209 IS
INCLUDED IN THIS ALTERNATIVE BID ITEM
BASE BID IS EXISTING TRAIL

20' TAPER EXISTING CRUSHED
ROCK TRAIL WIDTH TO PROPOSED
BOARDWALK WIDTH



- LEGEND:
- PROJECT BOUNDARY
 - EXISTING CONTOURS
 - EXISTING TREES (TO REMAIN)
 - EXISTING TIMBER EDGING (TO REMAIN)
 - PROPOSED BOARDWALK
 - RETROFITTED PILE GUIDED CONCRETE FLOATS
 - PROPOSED CONCRETE FLOATS
 - PROPOSED GANGWAY
 - PROPOSED BENCH
 - CONTROL POINT LOCATION AND NUMBER

DATUM AND GENERAL NOTES:

- HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83, U.S. FEET.
- VERTICAL DATUM: NAVD88
- SEE SHEET S-2 FOR STATIONING.

REVIEWED: _____ DATE _____
PARK ENGINEER _____
All work done in accordance with the City of Seattle Standard Plans and Specifications in effect on the date shown above, and supplemented by Special Provisions.



WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
LAYOUT PLAN AND CONTROL POINTS

100% DESIGN SUBMITTAL
NOT FOR CONSTRUCTION

DESIGNED BS
DRAWN BS/CH
CHECKED PH
ORDINANCE NO. _____
SPECIFICATION NO. _____
SCALE AS SHOWN

DATE OCTOBER 2020

SHEET 14 OF 31

CV-1

>>>>CAUTION - CALL 811<<<<
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Also, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR Inspection Request Line (206) 684-7034.

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N:\2016\1600057 - Seattle Arboretum Waterfront Trail\Drawings\Current\01_STRUC NOTES.dwg STRUC NOTES

Mar 04, 2020 6:56pm arordon

GENERAL NOTES

1. THESE NOTES CONTAIN GENERAL INFORMATION AND ARE NOT COMPLETE FOR CONSTRUCTION PURPOSES. CONTRACTOR SHALL VERIFY INFORMATION GIVEN HERE WITH SPECIFICATIONS AND OTHER DOCUMENTS AND BRING ANY CONFLICTS TO THE ATTENTION OF THE CITY BEFORE BEGINNING AFFECTED WORK. THE ENGINEER WILL RESOLVE ANY SUCH CONFLICT.
2. ALL DIMENSIONS AND DETAILS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION AND CONSTRUCTION.
3. ALL SHOP DRAWINGS FOR PRECAST CONCRETE ELEMENTS, REINFORCING STEEL AND MISCELLANEOUS STEEL SHALL BE SUBMITTED TO, AND REVIEWED BY, THE ENGINEER PRIOR TO FABRICATION.
4. SPECIAL CONDITIONS: CONTRACTOR SHALL VERIFY ALL LEVELS, DIMENSIONS, AND EXISTING CONDITIONS IN THE FIELD BEFORE PROCEEDING. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR FIELD CHANGES PRIOR TO INSTALLATION OR FABRICATION. IN CASE OF DISCREPANCIES BETWEEN THE EXISTING CONDITIONS AND THE DRAWINGS, THE CONTRACTOR SHALL OBTAIN DIRECTION FROM THE CITY BEFORE PROCEEDING. DIMENSIONS NOTED AS PLUS OR MINUS OR (REF) INDICATE UNVERIFIED DIMENSIONS AND ARE APPROXIMATE. NOTIFY THE CITY IMMEDIATELY OF CONFLICTS OR VARIATIONS FROM INDICATED DIMENSIONS. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS--DO NOT SCALE DRAWINGS. DIMENSIONS OF EXISTING CONDITIONS MAY BE BASED ON RECORD DRAWINGS AND ARE TO BE FIELD-VERIFIED BY THE CONTRACTOR.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.
6. SPECIAL INSPECTION AND TESTING: SEE PROJECT SPECIFICATIONS FOR SHOP AND/OR FIELD INSPECTIONS REQUIRED FOR PRE-ASSEMBLED BOARDWALK, FIELD-BUILT BOARDWALK, STEEL PIPE PILE FOUNDATIONS, PRE-ASSEMBLED GANGWAYS AND FLOATING STRUCTURES.
7. THE FOLLOWING REFERENCE DOCUMENTS WERE UTILIZED IN THE DEVELOPMENT OF THESE DRAWINGS:

a) "BOTTOM SURVEY OF FLOATING WALKWAY, ARBORETUM WATERFRONT TRAIL SEATTLE, WA" PROVIDED BY ECHELON ENGINEERING INC. DATED JANUARY 2020.

GENERAL DESIGN LOADS

1. ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE SBC 2015 EDITION.
2. ALL DESIGN AND CONSTRUCTION SHALL BE COMPLIANT WITH ADA REQUIREMENTS. THE MAXIMUM LONGITUDINAL AND TRANSVERSE SLOPE IN THE BOARDWALK SHALL BE LESS THAN 2%. A 5% SLOPE IS ACCEPTABLE BETWEEN STA 19+00 AND STA 19+66.9.
3. LIVE LOADS: IN ADDITION TO THE DEAD LOADS, THE FOLLOWING LIVE LOADS WERE USED FOR DESIGN:

DECK AND BOARDWALK	100 PSF
PEDESTRIAN GUARDRAIL	50 PLF (IN ANY DIRECTION APPLIED TO TOP)
	200 LB CONCENTRATED LOAD (IN ANY DIRECTION APPLIED TO TOP)
	50 LB HORIZ LOAD APPLIED TO AN AREA OF 1 SQ FT FOR INTERMEDIATE RAILS, BALUSTERS AND PANEL FILLERS

PILING

1. PILES SHALL BE DRIVEN TO THE MINIMUM TIP ELEVATIONS AND REQUIRED ULTIMATE CAPACITIES INDICATED ON SHEET S-9.
2. STEEL PILING SHALL CONFORM TO ASTM A252, GRADE 3 (MOD) WITH YIELD STRENGTH OF 50 KSI
3. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

FLOAT DESIGN LOADS

1. LIVE LOAD

A. UNIFORMLY DISTRIBUTED LIVE LOAD - 40 PSF

B. ONE CONCENTRATED LOAD OF 400 POUNDS ON 12" BY 12" AREA
2. WIND LOAD:

IBC EXPOSURE CATEGORY D - IMPORTANCE FACTOR = 1.0

110 MPH WIND SPEED (3-SECOND GUST)

OCCUPANCY CATEGORY TYPE 1
3. DESIGN WAVE:

1.0 FOOT IN HEIGHT, WITH VARYING WAVE LENGTHS CORRESPONDING TO WAVE PERIODS OF 1-3 SECONDS.
4. THE FLOAT AND ITS CONNECTIONS SHALL BE DESIGNED TO SUPPORT ALL LOAD COMBINATIONS REQUIRED BY SBC 2015 & ASCE MREP 50.
5. FLOAT CONNECTIONS, INCLUDE THOSE AT THE GUIDE PILES AND SHALL BE DESIGNED BASED ON THE CAPACITY OF THE PILES.

FLOAT FREEBOARD

1. DEAD LOAD FREE BOARD:14" MIN, 20" MAX
2. DEAD LOAD + UNIFORM LIVE LOAD:10" MIN
3. DEAD LOAD + LIVE POINT LOAD:13" MIN
4. DEAD LOAD AND UNIFORM LIVE LOAD + LIVE POINT LOAD:8" MIN

WOOD

1. SAWN LUMBER: SAWN LUMBER SHALL CONFORM TO "GRADING AND DRESSING RULES," WEST COAST LUMBER INSPECTION BUREAU (WCLB), LATEST EDITION. LUMBER SHALL BE KILN DRIED AND BE THE SPECIES AND GRADE NOTED BELOW. DESIGN STRESSES ARE BASED ON 2012 NDS.

USE	GRADE	Fb (PSI)
DIMENSIONAL LUMBER/ JOIST/BEAMS/SLEEPER, ETC.	DOUGLAS FIR - LARCH NO. 2	900
2" TO 4" THICK 2" AND WIDER		
2. FRAMING ACCESSORIES AND STRUCTURAL FASTENERS SHALL BE MANUFACTURED BY SIMPSON COMPANY (OR APPROVED EQUAL), AND OF THE SIZE AND TYPE SHOWN ON THE DRAWINGS. PROVIDE ZMAX OR HDG CORROSION RESISTANCE FOR ALL SIMPSON CONNECTORS. CONNECTOR FASTENERS SHALL BE AS SPECIFIED BY SIMPSON.
3. ALL FRAMING NAILS SHALL BE HOT-DIPPED GALVANIZED (PER ASTM A153) COMMON NAILS AND SHALL BE OF THE SIZE AND NUMBER INDICATED ON THE DRAWINGS. ALL WOOD SCREWS SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153 AND SHALL BE THE SIZE AND NUMBER INDICATED ON THE DRAWINGS.
4. WOOD PRESERVATIVE TREATMENT: ALL LUMBER AND TIMBERS SHALL BE FULL LENGTH PRESERVATIVE-TREATED CONFORMING TO AWPA USE CATEGORY UC4A.
5. ALL LUMBER AND TIMBERS SHALL BE BRANDED OR MARKED AFTER TREATMENT IN ACCORDANCE WITH AWPA STANDARD C1 AND M6. HANDLING, STORAGE AND FIELD TREATMENT SHALL BE IN ACCORDANCE WITH AWPA STANDARD M4.
6. THE TREATED LUMBER AND TIMBER SUPPLIER SHALL FURNISH A CERTIFICATE OF TREATMENT STATING COMPLIANCE WITH THE AWPA STANDARDS AND /OR BMPS FOR AQUATIC EXPOSURE.

DECKING

1. 1" DEEP, 3/4" x 4" RECTANGULAR MESH, ECOGRATE® 62 MOLDED GRATING DECKING SHALL BE PROVIDED FOR ALL DECKING MATERIAL. COLOR SHALL BE PER SPECIFICATIONS. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR HANDLING, STORAGE, CUTTING, AND INSTALLATION.
2. FASTENERS AND DECKING SHALL BE TAMPER RESISTANT
2. BOARDWALK DECKING AND FRAMING SHALL BE SUPPORTED BY ADJUSTABLE DECK SUPPORTS BY MRP SUPPORTS OR APPROVED EQUAL.
3. THE INITIAL SETTING OF THE FRAMING SHALL BE FULLY COLLAPSED AT THE COMPLETION AT CONSTRUCTION.
4. FRAMING SHALL BE SET TO ALLOW ADJUSTMENT OF DECK SUPPORTS FROM THE ABOVE DECK.

STRUCTURAL STEEL

STEEL MATERIALS:

CONNECTION MATERIAL, ANGLES, AND MISC. STEEL	ASTM A36
WOOD CONNECTION BOLTS	ASTM A307

1. ALL STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM A992
2. ALL STRUCTURAL STEEL MATERIAL SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN COMPLIANCE WITH ASTM A123.
3. ALL MISCELLANEOUS STEEL SHAPES AND PLATES, EXCEPT AS NOTED BELOW, SHALL CONFORM TO ASTM A 36.
4. STEEL PLATE NOTED AS GRADE 50 SHALL CONFORM TO ASTM A572, GRADE 50.
5. ECONOMY BOLTS SHALL CONFORM TO ASTM A 307, UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.
6. HIGH STRENGTH BOLTS FOR STEEL-TO-STEEL CONNECTIONS SHALL BE ASTM A325X.
7. ALL NUTS SHALL BE ASTM A 563, UNLESS NOTED OTHERWISE.
8. ALL WASHERS SHALL BE ASTM F 436, UNLESS NOTED OTHERWISE.
9. ALL STEEL ITEMS SHALL BE HOT-DIP GALVANIZED AND/OR COATED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS, UNLESS NOTED OTHERWISE.

WELDING

1. ALL WELDING SHALL BE PERFORMED BY WELDERS QUALIFIED FOR THE WELD AND POSITION SHOWN IN ACCORDANCE WITH AWS AND HAVING CURRENT CERTIFICATION FROM WABO.
2. ALL WELDS SHALL BE PERFORMED WITH PROCEDURES PREQUALIFIED OR QUALIFIED IN ACCORDANCE WITH AWS D1.1 OR D1.4.
3. THE WELDS SHOWN ARE FOR THE FINAL CONNECTIONS. FIELD WELD SYMBOLS ARE SHOWN WHERE FIELD WELDS ARE REQUIRED BY THE STRUCTURAL DESIGN. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING IF A WELD SHOULD BE SHOP-WELDED OR FIELD-WELDED IN ORDER TO FACILITATE THE STRUCTURAL STEEL ERECTION.
4. WELDING ELECTRODES SHALL BE 70 KSI STRENGTH AND SHALL BE "LOW-HYDROGEN" ELECTRODES.

GANGWAYS

1. THE BIDDER IS RESPONSIBLE FOR DESIGNING, DETAILING, FURNISHING AND INSTALLING ALUMINUM GANGWAYS AND COORDINATING THE GANGWAY CONNECTIONS AND INTERACTIONS WITH ADJACENT ELEMENTS INCLUDING CONCRETE FLOATS. THE GANGWAYS SHALL BE OF THE SAME SIZE AND TYPE SHOWN ON THE DRAWINGS. GANGWAYS AND CONNECTIONS SHALL BE DESIGNED ACCORDING TO THE SBC AND LOADS DESCRIBED HEREIN. THE BIDDER IS ALSO RESPONSIBLE FOR DESIGNING AND INSTALLING THE GANGWAY CONNECTIONS AT EACH END OF THE GANGWAY.
2. THE GANGWAY AND CONNECTIONS SHALL BE ABLE TO ACCOMMODATE THE WATER LEVEL RANGES SHOWN AND THE DEFLECTIONS OF THE STRUCTURE UNDER WIND AND WAVE LOADING.
3. DESIGN TO SUPPORT A MINIMUM OF ONE-HUNDERED (100) POUNDS PER SQUARE-FOOT UNIFORM LIVE LOAD OVER THEIR HORIZONTAL PROJECTED AREA AT THE FULL WATER LEVEL RANGE, ALONG WITH ALL DEAD LOADS.
4. GANGWAYS SHALL ALSO BE DESIGNED TO SUPPORT A CONCENTRATED LOAD OF ONE-THOUSAND (1000) POUNDS ON ANY THIRTY (30) BY THIRTY (30) INCH SQUARE ON THE GANGWAY, HOWEVER THE CONCENTRATED LOAD NEED NOT BE APPLIED SIMULTANEOUSLY WITH THE REQUIRED UNIFORM LIVE LOAD.
5. THE INFORMATION IN THIS DRAWING PACKAGE IS TO PROVIDE FABRICATION DETAILS OF THREE METAL GANGWAYS THAT CONNECT THE FLOATING STRUCTURES TO THE PILE SUPPORTED SECTION AND THE BOARDWALK. NO EFFORT HAS BEEN MADE IN DEVELOPING THESE STEEL FABRICATION DETAILS. AN ENGINEER SHALL BE ENGAGED TO DESIGN THE STRUCTURAL ADEQUACY OF THE THREE GANGWAYS.

GANGWAY LENGTHS	29 FT / 70 FT / 97 FT
GANGWAY TYPE	OPEN TRUSS
CLEAR DISTANCE BETWEEN CHORDS	5'-8" FT MIN
CLEAR DISTANCE BETWEEN HANDRAILS	5 FT
DECKING	ECOGRATE® 62 GRATING
GANGWAY DEAD LOAD	30PSF
LIVE LOAD	100 PSF
LIVE LOAD DEFLECTION CRITERIA	L/360

HDPE PIPE FOUNDATIONS

1. HIGH DENSITY POLYETHYLENE PIPE (HDPE) SHALL BE GRADE PE 3408 (PE 4710), DR 11, AND CONFORM TO THE REQUIREMENTS OF THE LATEST AWWA C901(C906). PIPE SHALL BE MANUFACTURED BY PERFORMANCE PIPE OR APPROVED EQUAL.
2. FITTINGS SHALL BE MOLDED AND IN CONFORMANCE WITH THE REQUIREMENTS OF ASTM D3350, ASTM 3261 FOR BUTT FUSION AND ASTM 2683 FOR SOCKET FUSION. PE GRADE AND MANUFACTURER OF ALL FITTINGS SHALL BE SAME AS THE PIPE.
3. PIPE SHALL BE HANDLED IN CONFORMANCE WITH SECTION 7-09.3 (13) OF THE WSDOT STANDARD SPECIFICATIONS. HANDLE PIPE TO PREVENT DAMAGE TO THE PIPE, PIPE LINING, OR COATING. DAMAGE TO THE PIPE, PIPE LINING, OR COATING, IF ANY, SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER OR REPLACED AT THE CONTRACTOR'S EXPENSE.
4. HDPE PIPE FOUNDATIONS SHALL BE FILLED WITH POLYSTYRENE FILL.

REINFORCED CONCRETE

1. CONCRETE MIXES SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENT:

MIX	MIN. f'c (PSI)	TEST AGE (DAYS)
CAST-IN-PLACE CONCRETE	4,000	28

2. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

STRUCTURAL ABBREVIATIONS

AB	ANCHOR BOLT	INFO	INFORMATION
ADD'L	ADDITIONAL	INT	INTERIOR
ADJ	ADJUSTABLE	JST	JOIST
ANCH	ANCHOR	JT	JOINT
ARCH	ARCHITECTURAL	K	KIP (1,000 LBS.)
B/	BOTTOM OF	KSF	KIPS PER SQUARE FOOT
BLKG	BLOCKING	LF	LINEAL FOOT
BM	BEAM	LLH	LONG LEG HORIZONTAL
BOT	BOTTOM	LLV	LONG LEG VERTICAL
BRG	BEARING	LP	LOW POINT
BTWN	BETWEEN	MAX	MAXIMUM
CC	CENTER TO CENTER	MFR	MANUFACTURER
CIP	CAST IN PLACE	MIN	MINIMUM
CL	CENTERLINE	MISC	MISCELLANEOUS
CLR	CLEAR	NOM	NOMINAL
CONC	CONCRETE	NO	NUMBER
CONN	CONNECTION	NS	NEAR SIDE
CONST	CONSTRUCTION	NTS	NOT TO SCALE
CONT	CONTINUOUS	OC	ON CENTER
CONTR	CONTRACTOR	OPP	OPPOSITE
COORD	COORDINATE	P	POST
CTR	CENTER	PC	PIECE
CY	CUBIC YARD	PL	PLATE
DEMO	DEMOLISH	PSI	POUNDS PER SQUARE INCH
DET	DETAIL	PSF	POUNDS PER SQUARE FOOT
DF	DOUGLAS FIR	PT	POINT
DIA	DIAMETER	R	RADIUS
DIAG	DIAGONAL	REINF	REINFORCING
DKG	DECKING	REQ'D	REQUIRED
DN	DOWN	SBC	SEATTLE BUILDING CODE
DWG	DRAWING	SCHED	SCHEDULE
DWL	DOWEL	SECT	SECTION
EA	EACH	SHT	SHEET
EF	EACH FACE	SHI	SIMILAR
EL	ELEVATION	SPEC	SPECIFICATION
EQ	EQUAL	SQ	SQUARE
ES	EACH SIDE	SS	STAINLESS STEEL
EW	EACH WAY	STD	STANDARD
EX	EXISTING	STL	STEEL
FDN	FOUNDATION	STRUCT	STRUCTURAL
FIN	FINISH	SYM	SYMMETRICAL
FS	FAR SIDE	T/	TOP OF
FT	FEET	T&B	TOP AND BOTTOM
FTG	FOOTING	T&G	TONGUE AND GROOVE
GALV	GALVANIZED	THK	THICK(NESS)
GEN	GENERAL	THRU	THROUGH
GR	GRADE	TRANS	TRANSVERSE
GSB	GYPSTUM WALL BOARD	TYP	TYPICAL
HF	HEM-FIR	UNO	UNLESS NOTED OTHERWISE
HGR	HANGER	WD	WOOD
HK	HOOK	WHS	WELDED HEADED STUD
HORIZ	HORIZONTAL	W/O	WITHOUT
HP	HIGH POINT	WP	WORK POINT
IBC	INTERNATIONAL BUILDING CODE	WTS	WELDED THREADED STUD
IN	INCH		

STRUCTURAL DRAWING LIST

- S-1STRUCTURAL NOTES, ABBREVIATIONS & DRAWING INDEX
- S-2STRUCTURAL PLAN
- S-3STRUCTURAL PARTIAL PLANS 1 & 2
- S-4STRUCTURAL PARTIAL PLANS 3 & 4
- S-5STRUCTURAL PARTIAL PLAN 5
- S-6STRUCTURAL PARTIAL PLAN 6
- S-7STRUCTURAL PARTIAL PLANS 7 & 8
- S-8GANGWAY ELEVATIONS AND SECTIONS
- S-9PILE SUPPORTED PLATFORMS
- S-10TRANSIENT FLOAT DETAILS
- S-11MODULE DETAILS 1
- S-12MODULE DETAILS 2
- S-13VIEWING PLATFORM DETAILS
- S-14MISCELLANEOUS DETAILS

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Also, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR Inspection Request Line (206) 684-7034.

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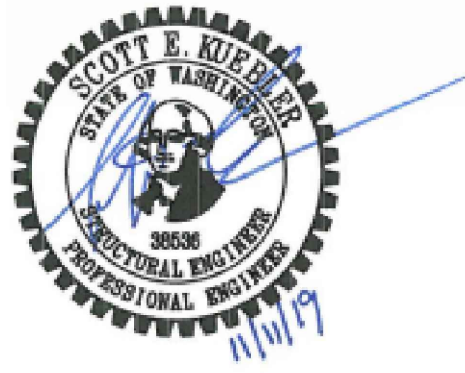
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PARK ENGINEER _____ DATE _____

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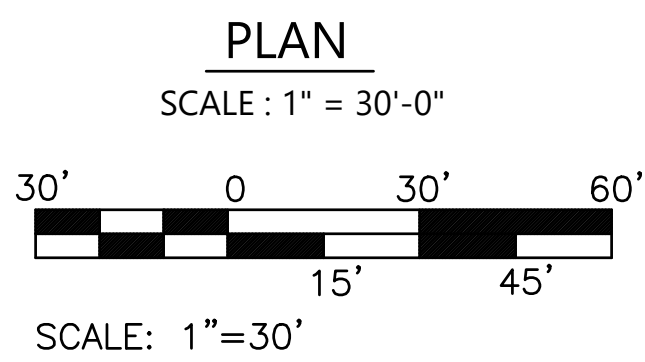
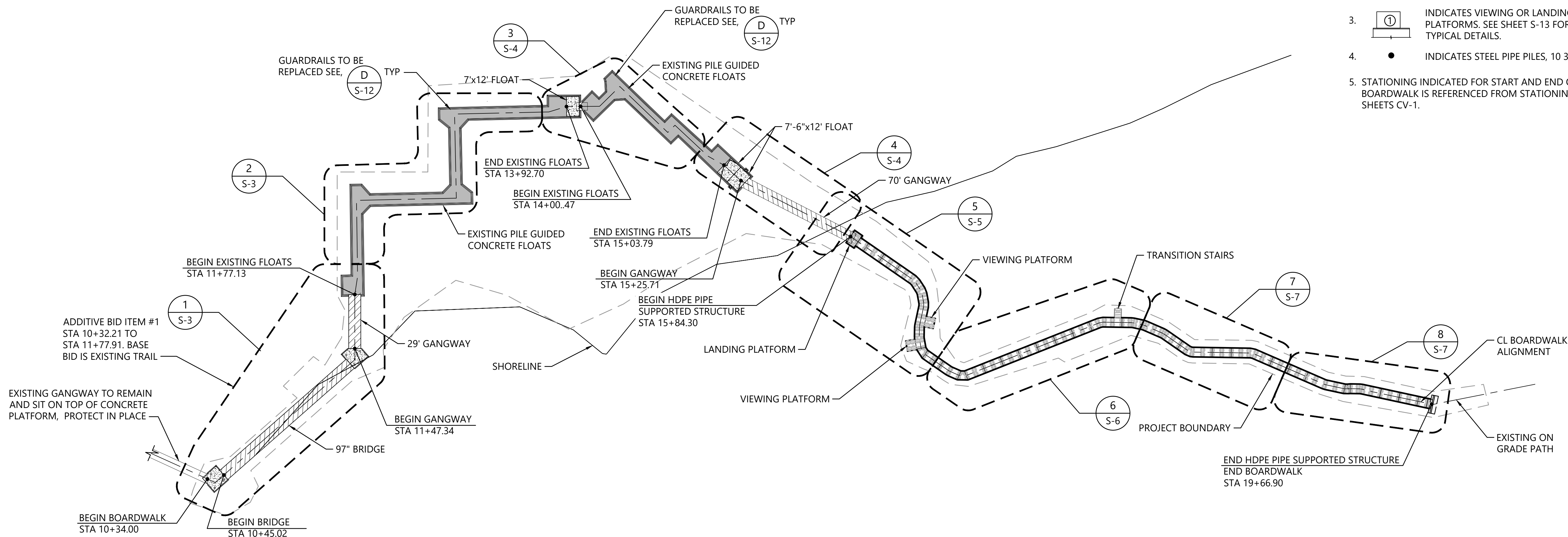
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Tacoma, Washington 98407
(253) 396-0150 Fax (253) 396-0162



Seattle
Parks & Recreation

WASHINGTON PARK ARBORETUM	DESIGNED _____ AER _____	DATE _____
	DRAWN _____ TRL _____	
WATERFRONT TRAIL PROJECT	CHECKED _____ IDF _____	SHEET 15 OF 31
STRUCTURAL NOTES, ABBREVIATIONS AND DRAWING INDEX	ORDINANCE NO. _____ ORDINANCE _____	S-1
	SPECIFICATION NO. _____ CONTRACT _____	
	SCALE _____ As Noted _____	



- NOTES:
- INDICATES PRE-ASSEMBLED BOARDWALK MODULE, SEE 6 S-11 AND 1 S-12
 - INDICATES GANGWAY, SEE SHEET S-8 FOR DETAILS.
 - INDICATES RETROFITTED FLOATING STRUCTURE
 - INDICATES CONCRETE FLOAT SEE SHEET S-10
 - INDICATES VIEWING OR LANDING PLATFORMS. SEE SHEET S-13 FOR TYPICAL DETAILS.
 - INDICATES STEEL PIPE PILES, 10 3/4"Øx1/2"
 - STATIONING INDICATED FOR START AND END OF FIELD-BUILT BOARDWALK IS REFERENCED FROM STATIONING SHOWN ON SHEETS CV-1.



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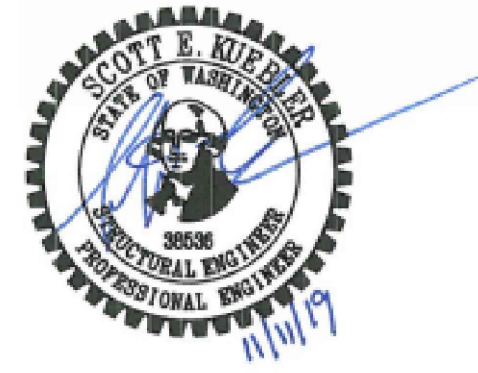
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kpff

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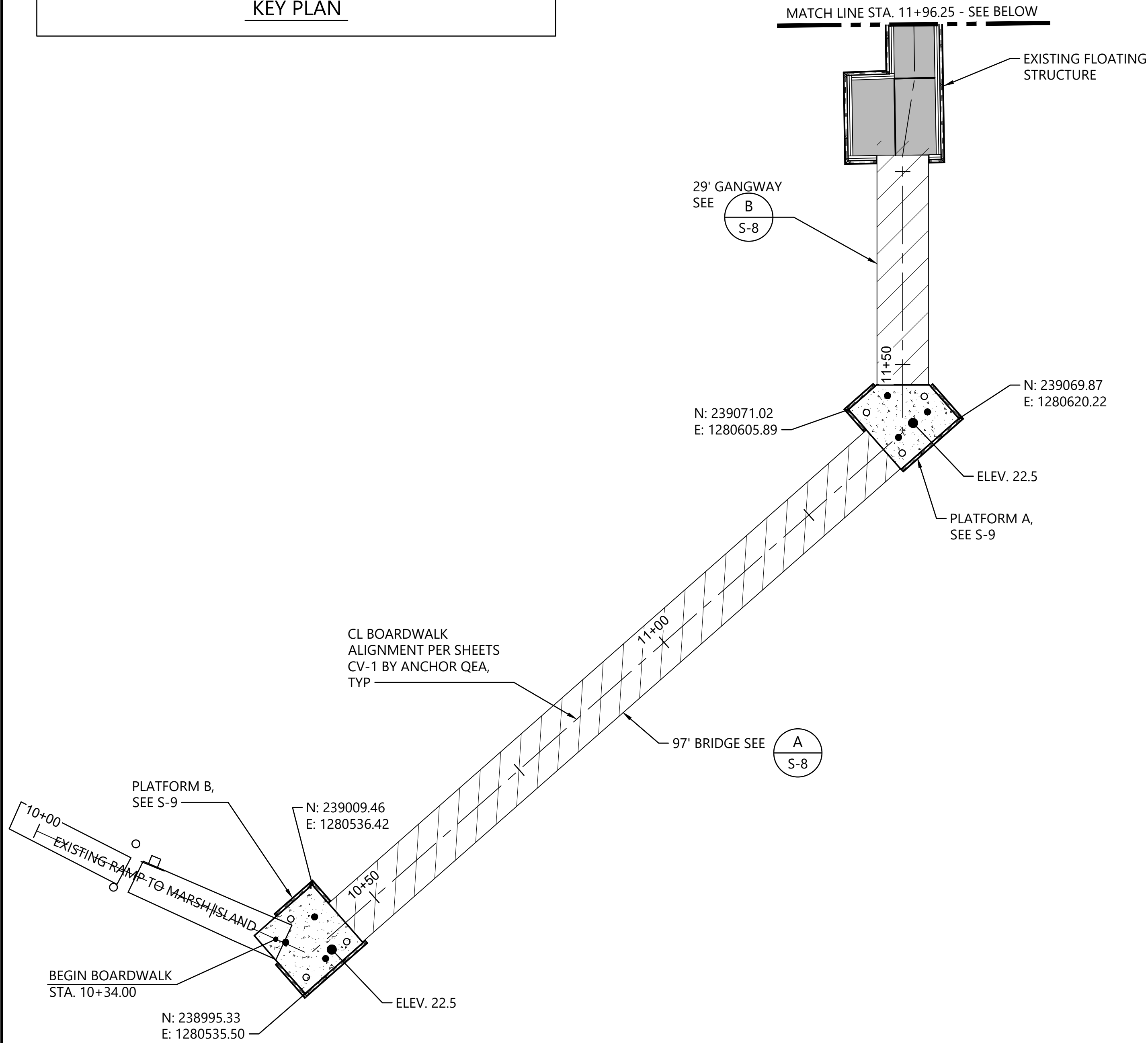
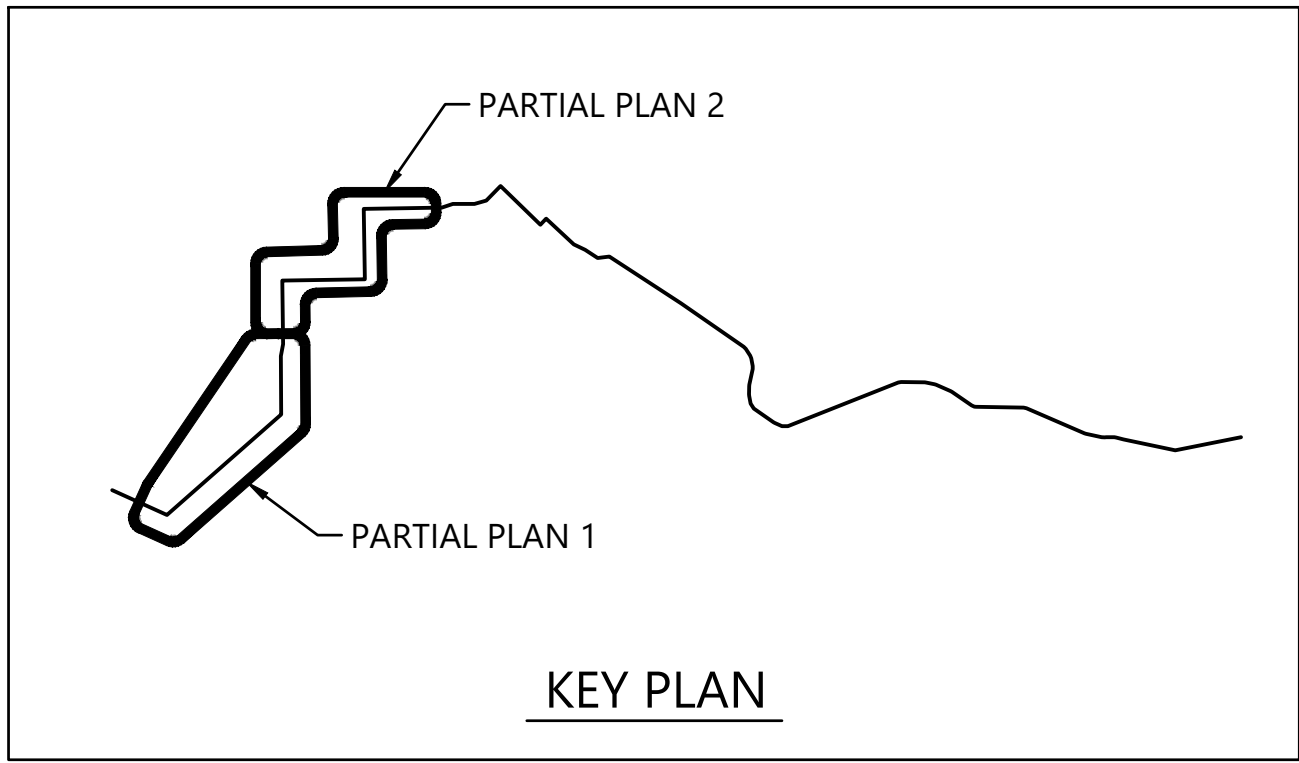
WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
STRUCTURAL PLAN

DESIGNED AER
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SPECIFICATION NO. CONTRACT
SCALE As Noted

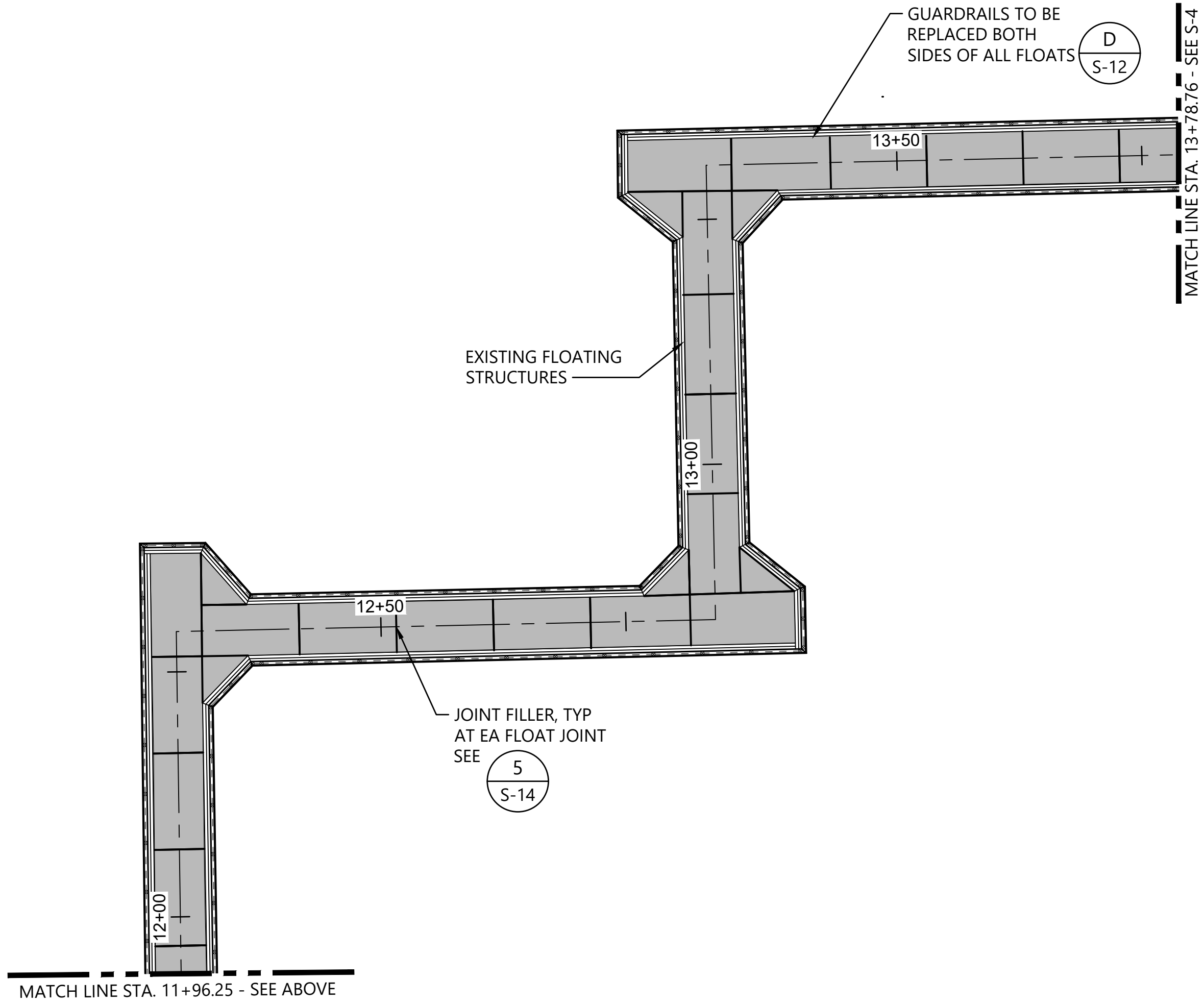
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S-2

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Mar 04, 2020 7:00pm arondan

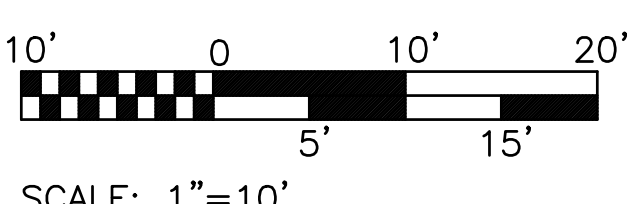
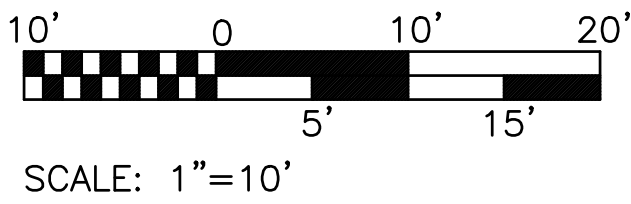
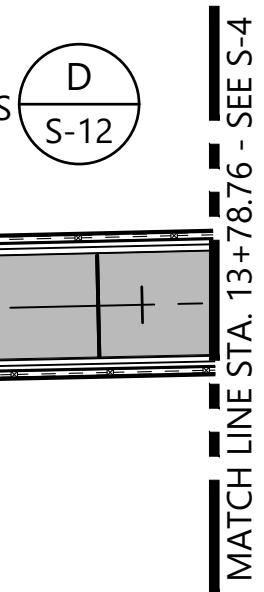
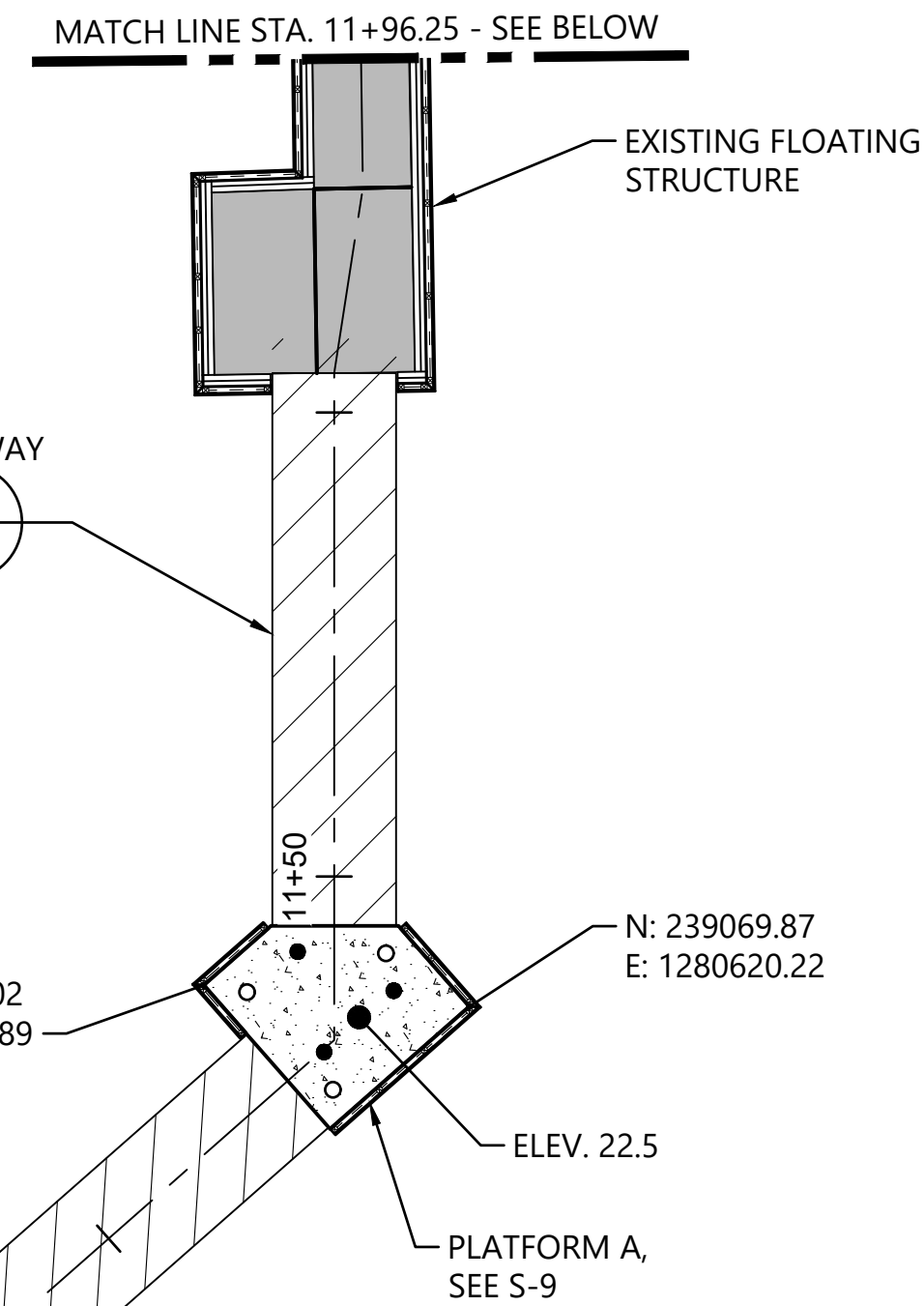


1 PARTIAL PLAN 1 - ALT. BID ITEM #1
SCALE: 1" = 10'
EXISTING TRAIL CONDITION IS BASE BID



2 PARTIAL PLAN 2
SCALE: 1" = 10'

- NOTES:
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 - INDICATES RETROFITTED FLOATING STRUCTURE
 - INDICATES CONCRETE FLOAT SEE SHEET S-10
 - INDICATES VIEWING OR LANDING PLATFORMS, SEE SHEET S-13 FOR TYPICAL DETAILS.
 - INDICATES STEEL PIPE PILES, 10 3/4"Øx1/2"
 - STATIONING INDICATED FOR START AND END OF FIELD-BUILT BOARDWALK IS REFERENCED FROM STATIONING SHOWN ON SHEETS CV-1.
 - CONTRACTOR SHALL ADDRESS BUOYANCY AND FLOAT BALANCE BY INCORPORATING FLOTATION DEVICES AFTER INSTALLING NEW STRUCTURAL ELEMENTS OF THE PROJECT
 - CONTRACTOR SHALL COORDINATE REPLACEMENT OF DETERIORATED WALERS AND RODS WITH THE CITY. ASSUME 25% OF REPLACEMENT FOR BIDDING PURPOSES.



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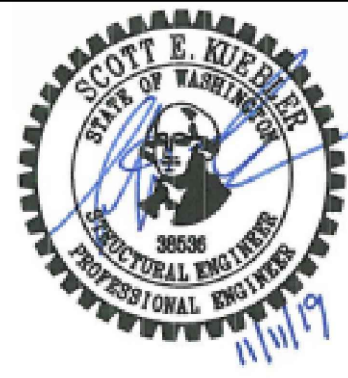
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kppff

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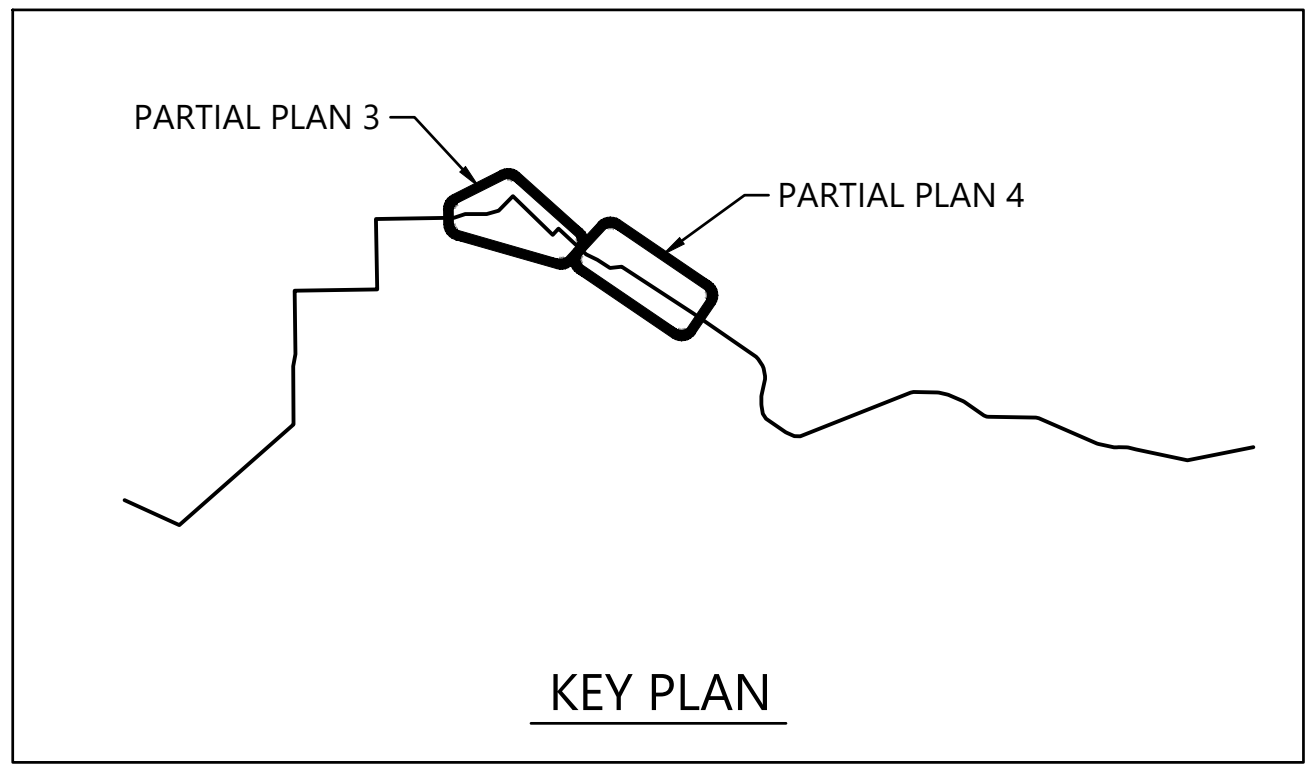
WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
STRUCTURAL PARTIAL PLANS 1 & 2

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SCALE As Noted

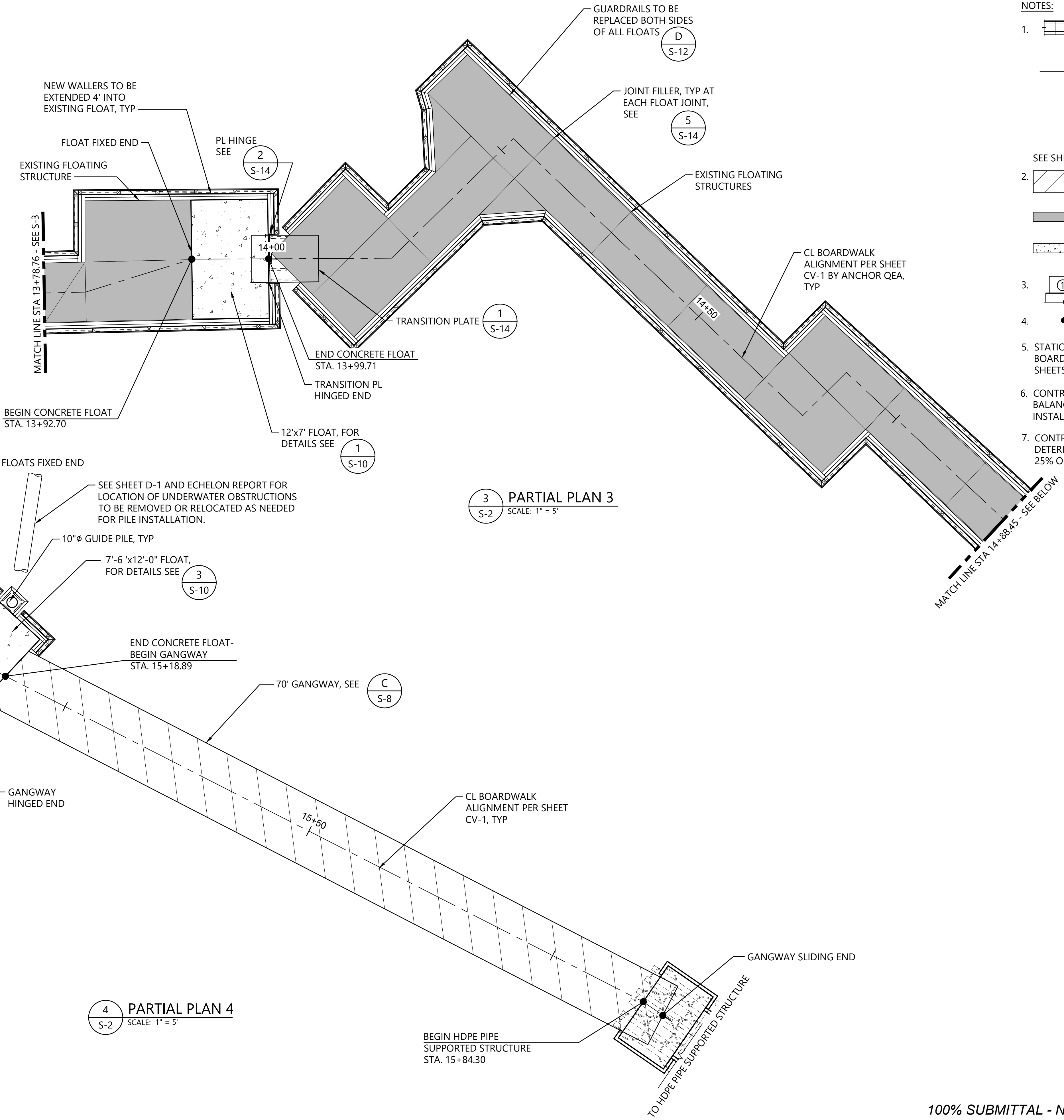
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S-3

N:\2016\1600057 - Seattle Arboretum Waterfront Trail\Drawings\Current\04 PARTIAL PLANS 3 & 4.dwg PARTIAL PLANS 3 & 4

Mar 04, 2020 7:01pm arondan



KEY PLAN



- NOTES:
- INDICATES PRE-ASSEMBLED BOARDWALK MODULE, SEE 6 S-11 AND 1 S-12
 - INDICATES GANGWAY, SEE SHEET S-8 FOR DETAILS.
 - INDICATES VIEWING OR LANDING PLATFORMS, SEE SHEET S-13 FOR TYPICAL DETAILS.
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 - STATIONING INDICATED FOR START AND END OF FIELD-BUILT BOARDWALK IS REFERENCED FROM STATIONING SHOWN ON SHEETS CV-1.
 - CONTRACTOR SHALL ADDRESS BUOYANCY AND FLOAT BALANCE BY INCORPORATING FLOTATION DEVICES AFTER INSTALLING NEW STRUCTURAL ELEMENTS OF THE PROJECT
 - CONTRACTOR SHALL COORDINATE REPLACEMENT OF DETERIORATED WALERS AND RODS WITH THE CITY. ASSUME 25% OF REPLACEMENT FOR BIDDING PURPOSES.
- | MARK | TYPE |
|------|--------------------|
| (A) | 10-FOOT STRAIGHT |
| (B) | 5-FOOT STRAIGHT |
| (C) | 45-DEGREE WEDGE |
| (D) | 22.5-DEGREE WEDGE |
| (E) | 11.25-DEGREE WEDGE |
- SEE SHEETS S-11 & S-12 FOR TYPICAL DETAILS, UNO
- INDICATES RETROFITTED FLOATING STRUCTURE
- INDICATES CONCRETE FLOAT SEE SHEET S-10

>>>>CAUTION - CALL 811<<<<
UTILITY NOTIFICATION CENTER
BEFORE YOU DIG!
WWW.CALL811.COM

Also, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR Inspection Request Line (206) 684-7034.

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NO.	REVISION -- AS BUILT	DATE

REVIEWED: _____ DATE _____
PARK ENGINEER _____
All work done in accordance with the City of Seattle Standard Plans and Specifications in effect on the date shown above, and supplemented by Special Provisions.

kpff
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Tacoma, Washington 98407
(253) 396-0150 Fax (253) 396-0162



WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
STRUCTURAL PARTIAL PLANS 3 & 4

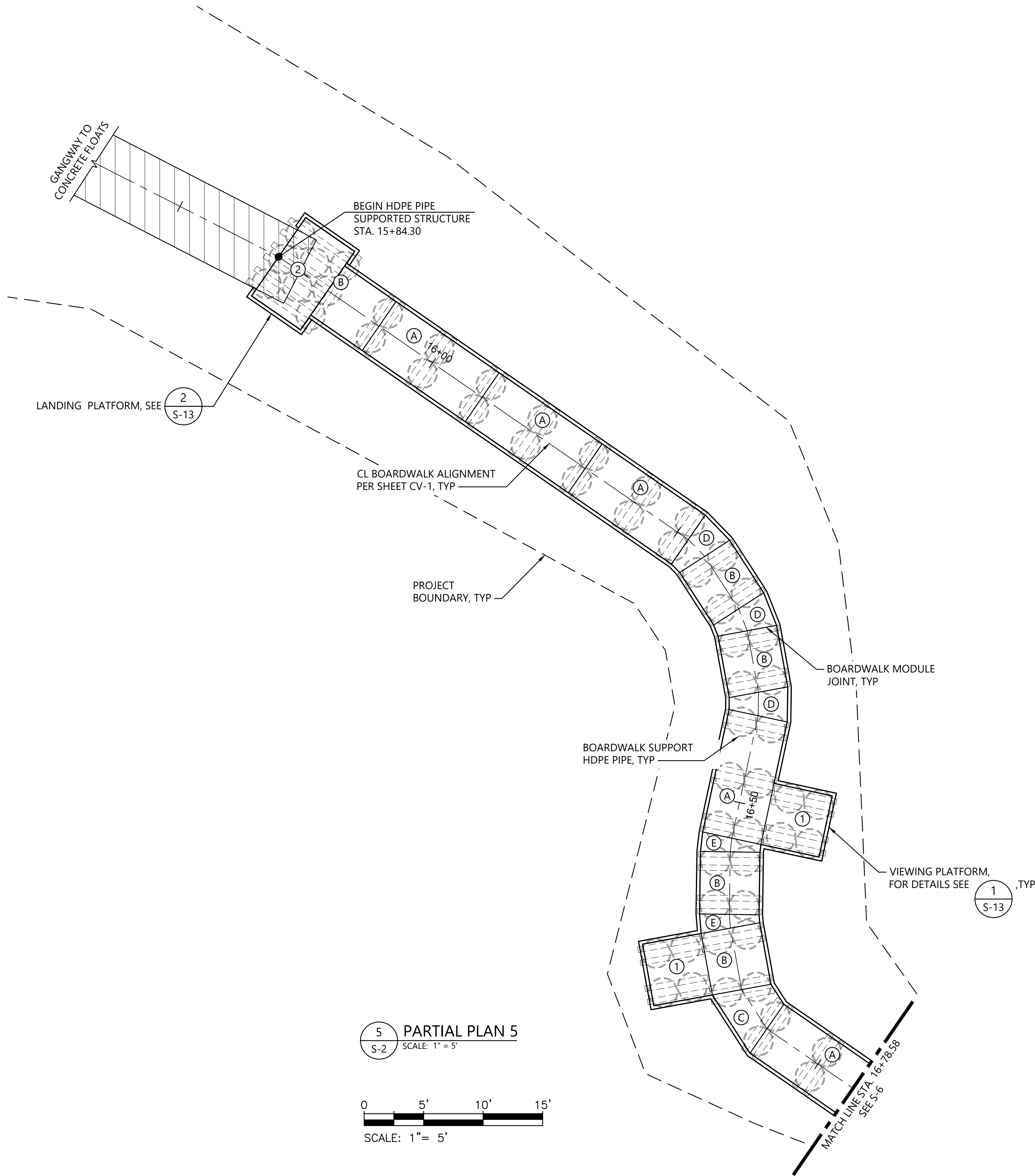
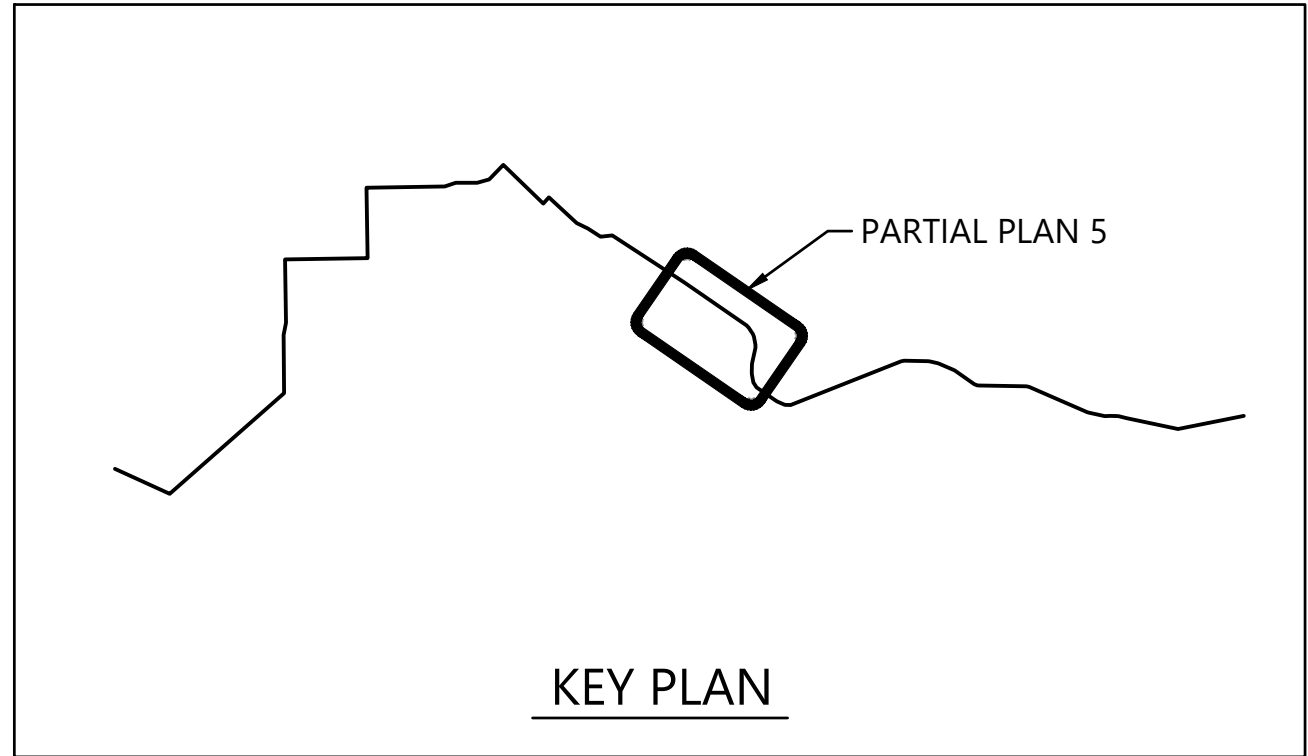
DESIGNED AER
DRAWN TRL
CHECKED IDF
ORDINANCE NO. _____
SPECIFICATION NO. CONTRACT
SCALE As Noted

DATE
SHEET 18 OF 31
S-4

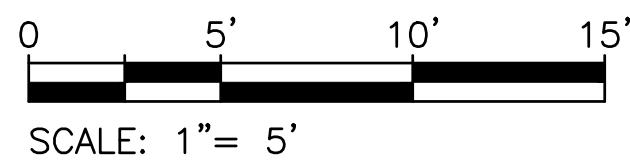
100% SUBMITTAL - NOT FOR CONSTRUCTION

N:\2016\1600057 - Seattle Arboretum Waterfront Trail\Drawings\Current\05. PARTIAL PLAN 5.dwg PARTIAL PLAN 5


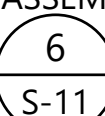
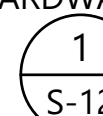
Mar 04, 2020 7:02pm arondan

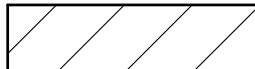


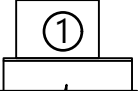



5 PARTIAL PLAN 5
SCALE: 1" = 5'



NOTES:

-  INDICATES PRE-ASSEMBLED BOARDWALK MODULE, SEE  6 S-11 AND  1 S-12
- | MARK | TYPE |
|------|--------------------|
| (A) | 10-FOOT STRAIGHT |
| (B) | 5-FOOT STRAIGHT |
| (C) | 45-DEGREE WEDGE |
| (D) | 22.5-DEGREE WEDGE |
| (E) | 11.25-DEGREE WEDGE |

SEE SHEETS S-11 & S-12 FOR TYPICAL DETAILS, UNO
-  INDICATES GANGWAY, SEE SHEET S-8 FOR DETAILS.
-  INDICATES RETROFITTED FLOATING STRUCTURE
-  INDICATES CONCRETE FLOAT SEE SHEET S-10
-  INDICATES VIEWING OR LANDING PLATFORMS. SEE SHEET S-13 FOR TYPICAL DETAILS.
-  INDICATES STEEL PIPE PILES, 10 3/4"Øx1/2"
- STATIONING INDICATED FOR START AND END OF FIELD-BUILT BOARDWALK IS REFERENCED FROM STATIONING SHOWN ON SHEETS CV-1.
- CUT AND FILL TRAIL AS REQUIRED SUCH THAT THE COMPLETED BOARDWALK HAS A MAXIMUM TRANSVERSE SLOPE OF 2%. MAXIMUM LONGITUDINAL SLOPE SHALL BE 2% FROM STA. 15+84.30 TO STA. 19+00.00. MAXIMUM LONGITUDINAL SLOPE SHALL BE 5% FROM STA. 19+00.00 TO STA. 19+66.90.



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>>>>CAUTION - CALL 811<<<<
UTILITY NOTIFICATION CENTER
BEFORE YOU DIG!
WWW.CALL811.COM

Also, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR Inspection Request Line (206) 684-7034.

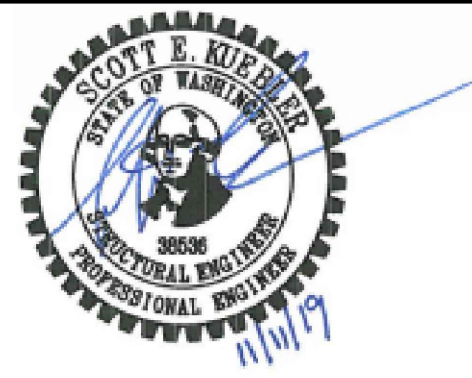
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REVIEWED: _____ DATE _____
PARK ENGINEER

All work done in accordance with the City of Seattle Standard Plans and Specifications in effect on the date shown above, and supplemented by Special Provisions.

kpff

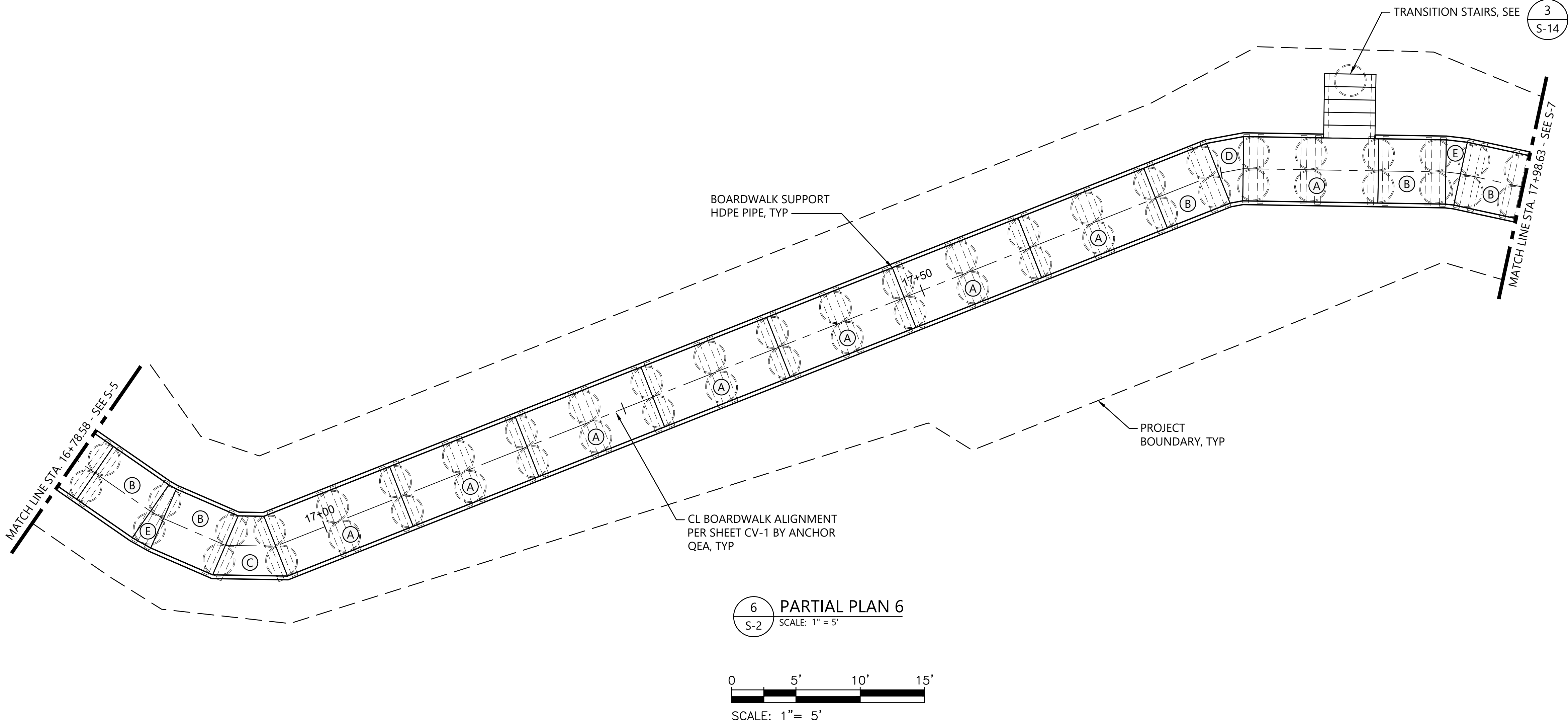
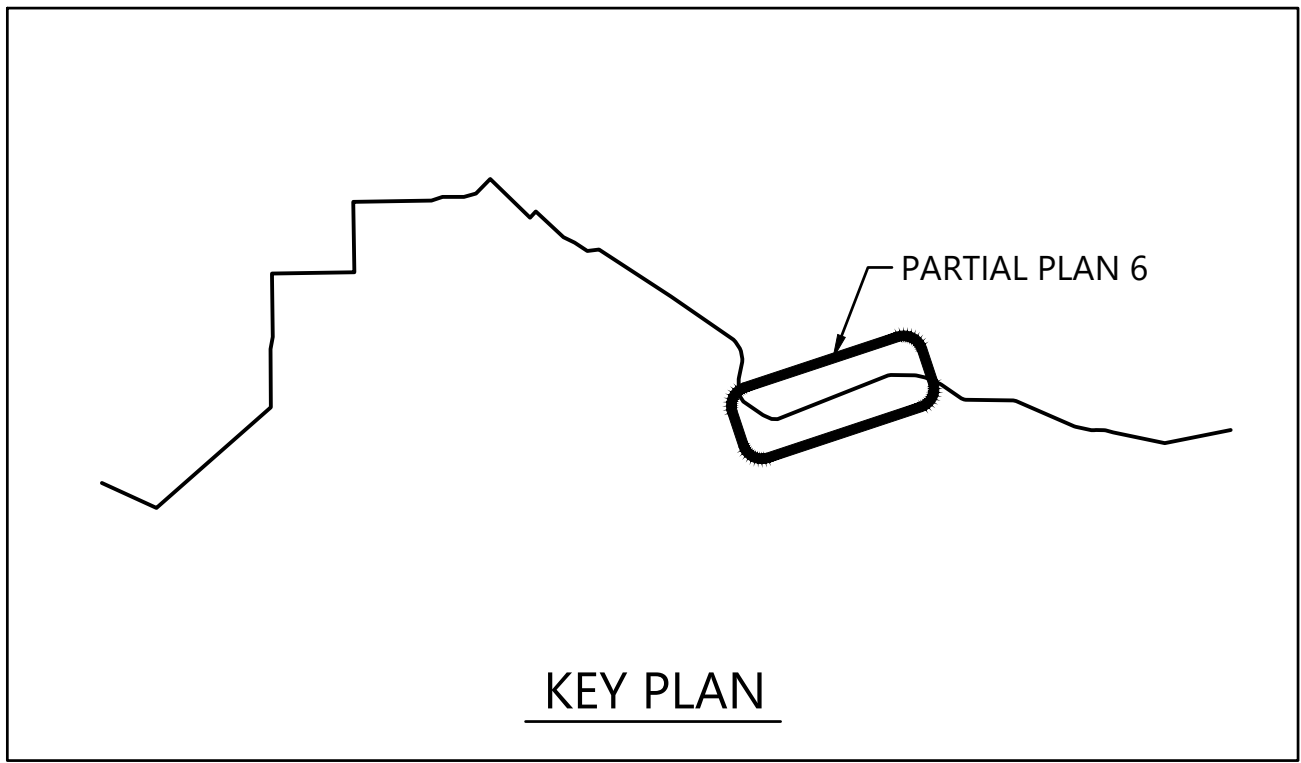
2407 North 31st Street, Suite 100
Tacoma, Washington 98407
(253) 396-0150 Fax (253) 396-0162



WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
STRUCTURAL PARTIAL PLAN 5

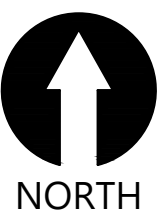
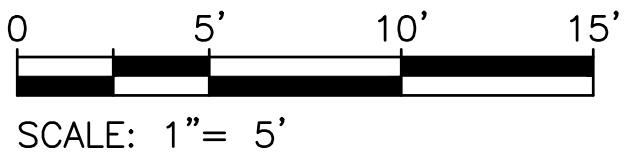
DESIGNED _____ AER
DRAWN _____ TRL
CHECKED _____ IDF
ORDINANCE NO. _____ ORDINANCE
SPECIFICATION NO. _____ CONTRACT
SCALE _____ As Noted

DATE _____
SHEET 19 OF 31
S-5



- NOTES:
- INDICATES PRE-ASSEMBLED BOARDWALK MODULE, SEE 6 S-11 AND 1 S-12
 - SEE SHEETS S-11 & S-12 FOR TYPICAL DETAILS, UNO
 - INDICATES GANGWAY, SEE SHEET S-8 FOR DETAILS.
 - INDICATES RETROFITTED FLOATING STRUCTURE
 - INDICATES CONCRETE FLOAT SEE SHEET S-10
 - INDICATES VIEWING OR LANDING PLATFORMS. SEE SHEET S-13 FOR TYPICAL DETAILS.
 - INDICATES STEEL PIPE PILES, 10 3/4"Øx1/2"
 - STATIONING INDICATED FOR START AND END OF FIELD-BUILT BOARDWALK IS REFERENCED FROM STATIONING SHOWN ON SHEETS CV-1.
 - CUT AND FILL TRAIL AS REQUIRED SUCH THAT THE COMPLETED BOARDWALK HAS A MAXIMUM TRANSVERSE SLOPE OF 2%. MAXIMUM LONGITUDINAL SLOPE SHALL BE 2% FROM STA. 15+84.30 TO STA. 19+00.00. MAXIMUM LONGITUDINAL SLOPE SHALL BE 5% FROM STA. 19+00.00 TO STA. 19+66.90.

6 PARTIAL PLAN 6
S-2 SCALE: 1" = 5'



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>>>>CAUTION - CALL 811<<<<
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WWW.CALL811.COM

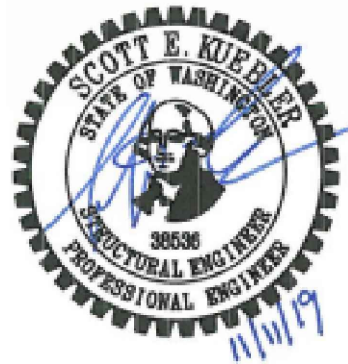
Also, verify all underground utilities not located by the
811 service by using a commercial location service and
call SPR Inspection Request Line (206) 684-7034.

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NO.	REVISION -- AS BUILT	DATE

REVIEWED: _____ DATE _____
PARK ENGINEER
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Plans and Specifications in effect on the date shown above, and
supplemented by Special Provisions.

kpff

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Tacoma, Washington 98407
(253) 396-0150 Fax (253) 396-0162

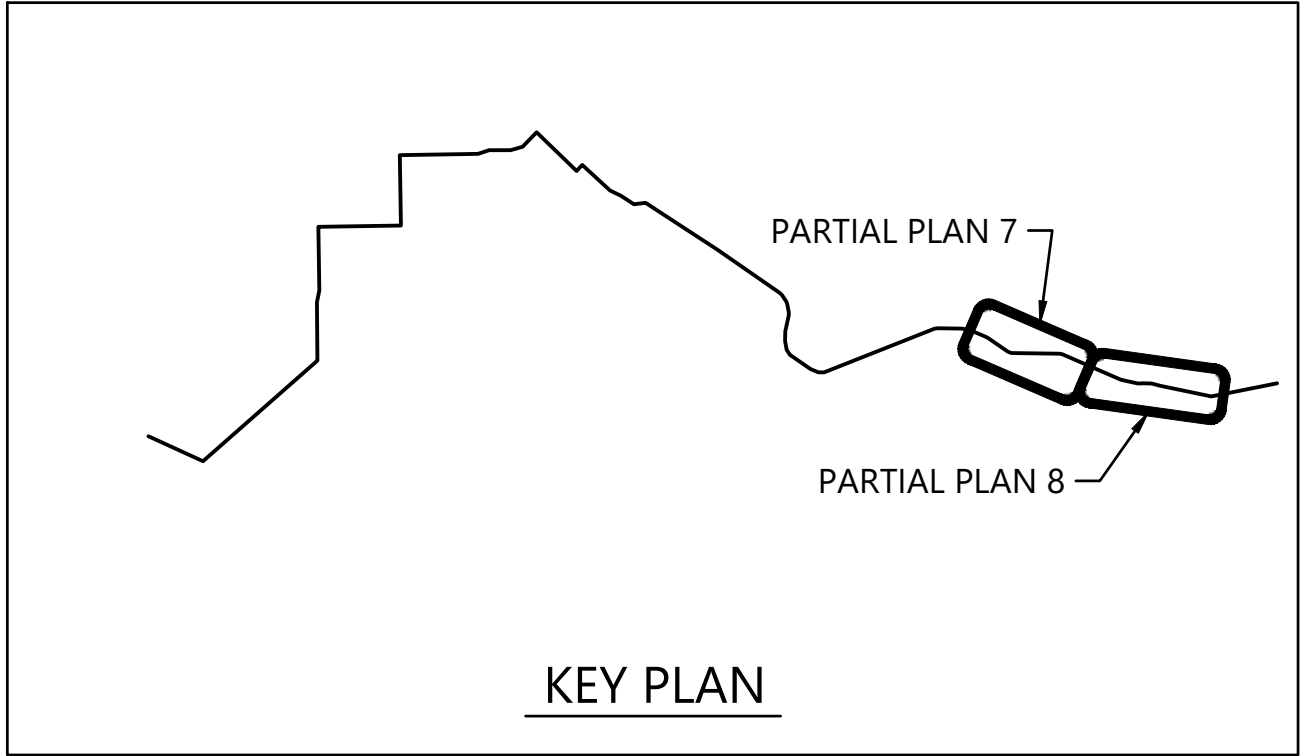


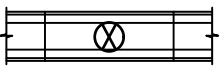
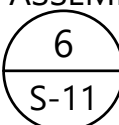
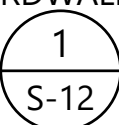
Seattle
Parks & Recreation

WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
STRUCTURAL PARTIAL PLAN 6

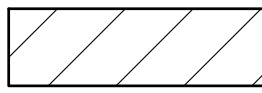
DESIGNED AER
DRAWN TRL
CHECKED IDF
ORDINANCE NO. _____ ORDINANCE
SPECIFICATION NO. _____ CONTRACT
SCALE As Noted


DATE
SHEET 20 OF 31
S-6

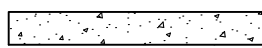
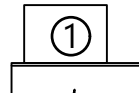


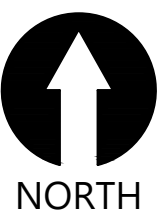
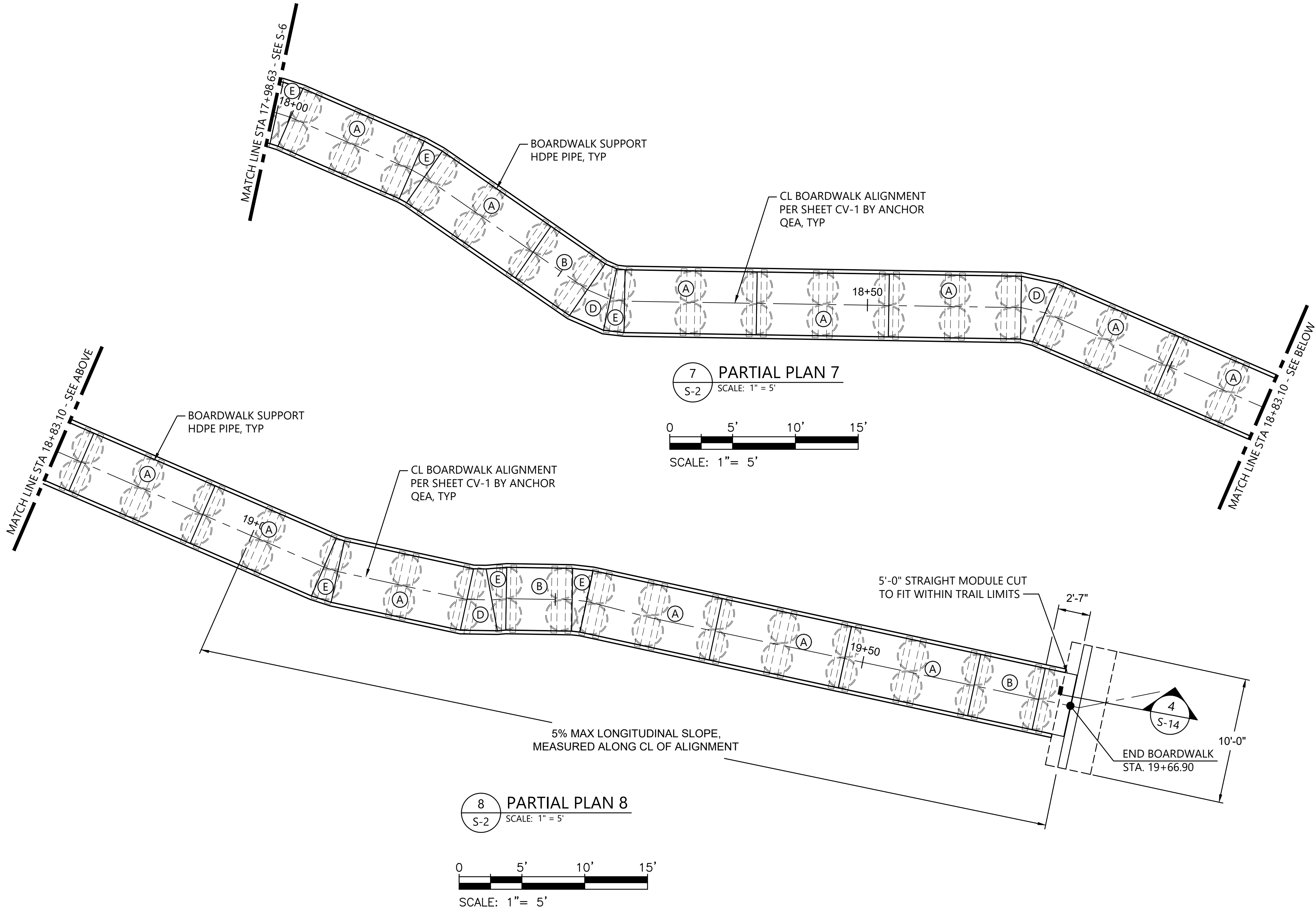
- NOTES:
-  INDICATES PRE-ASSEMBLED BOARDWALK MODULE, SEE  6 S-11 AND  1 S-12
 - | MARK | TYPE |
|------|--------------------|
| (A) | 10-FOOT STRAIGHT |
| (B) | 5-FOOT STRAIGHT |
| (C) | 45-DEGREE WEDGE |
| (D) | 22.5-DEGREE WEDGE |
| (E) | 11.25-DEGREE WEDGE |

SEE SHEETS S-11 & S-12 FOR TYPICAL DETAILS, UNO

 INDICATES GANGWAY, SEE SHEET S-8 FOR DETAILS.

 INDICATES RETROFITTED FLOATING STRUCTURE

 INDICATES CONCRETE FLOAT SEE SHEET S-10
 -  INDICATES VIEWING OR LANDING PLATFORMS. SEE SHEET S-13 FOR TYPICAL DETAILS.
 - INDICATES STEEL PIPE PILES, 10 3/4"φx1/2"
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100% SUBMITTAL - NOT FOR CONSTRUCTION

>>>>CAUTION - CALL 811<<<<
UTILITY NOTIFICATION CENTER
BEFORE YOU DIG!
WWW.CALL811.COM

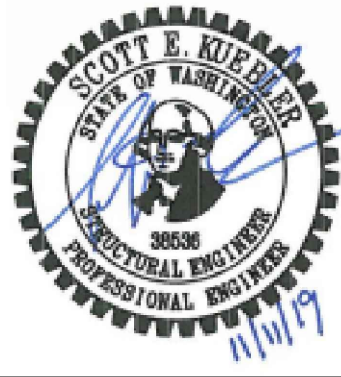
Also, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR Inspection Request Line (206) 684-7034.

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REVIEWED: _____ DATE _____
PARK ENGINEER _____
All work done in accordance with the City of Seattle Standard Plans and Specifications in effect on the date shown above, and supplemented by Special Provisions.

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Tacoma, Washington 98407
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Seattle
Parks & Recreation

WASHINGTON PARK ARBORETUM

WATERFRONT TRAIL PROJECT

STRUCTURAL PARTIAL PLANS 7 & 8

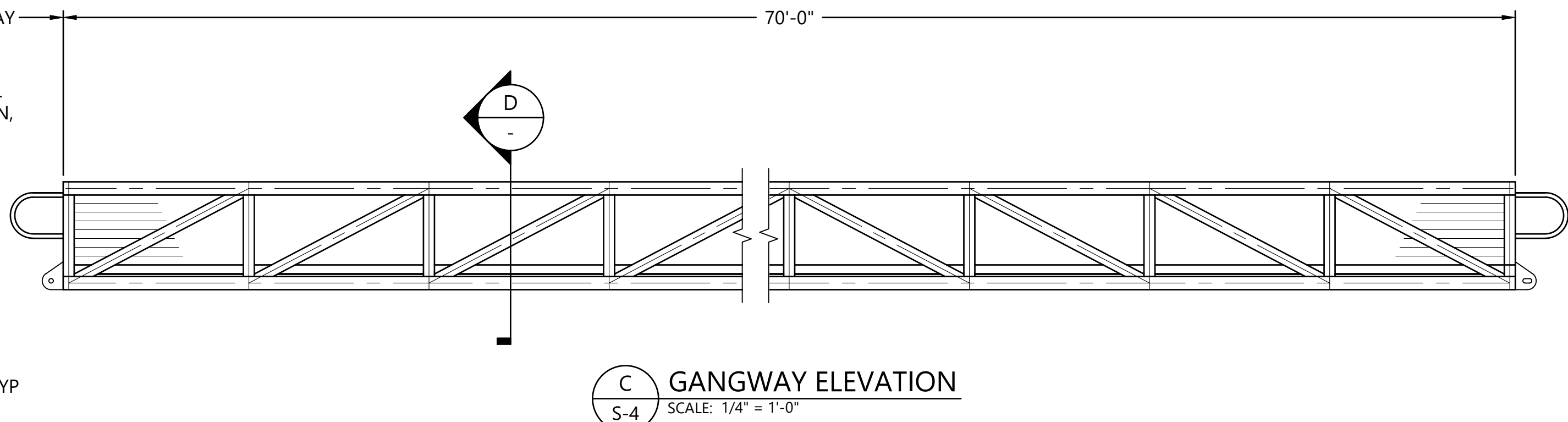
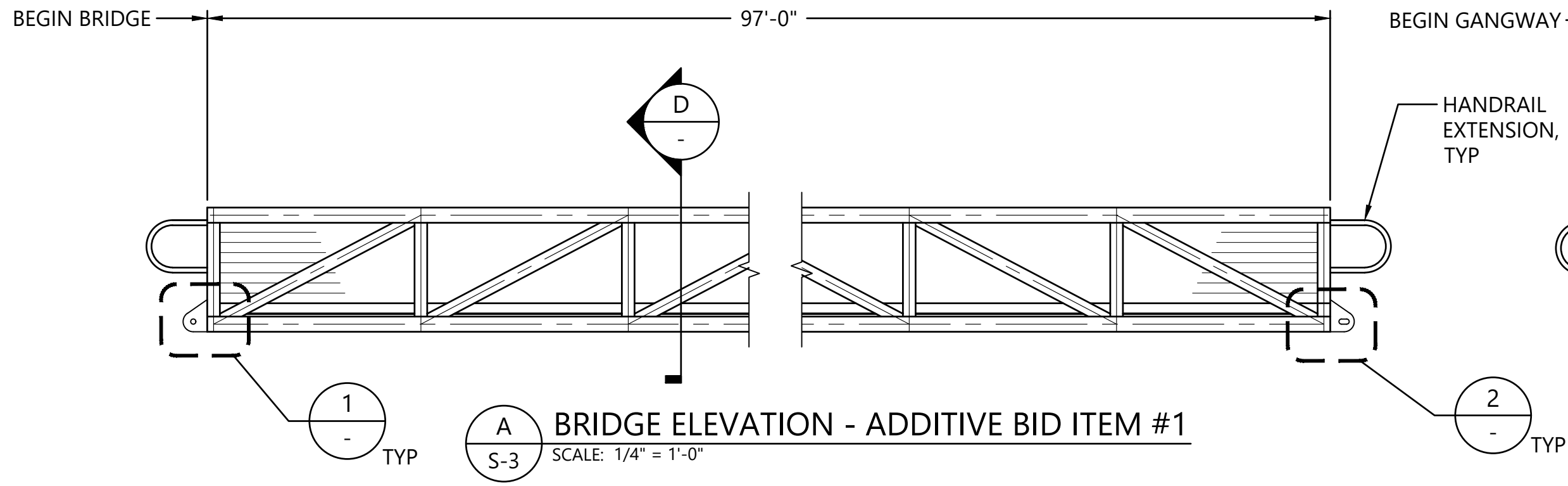
DESIGNED	AER
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SPECIFICATION NO.	CONTRACT
SCALE	As Noted

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SHEET 21 OF 31

S-7

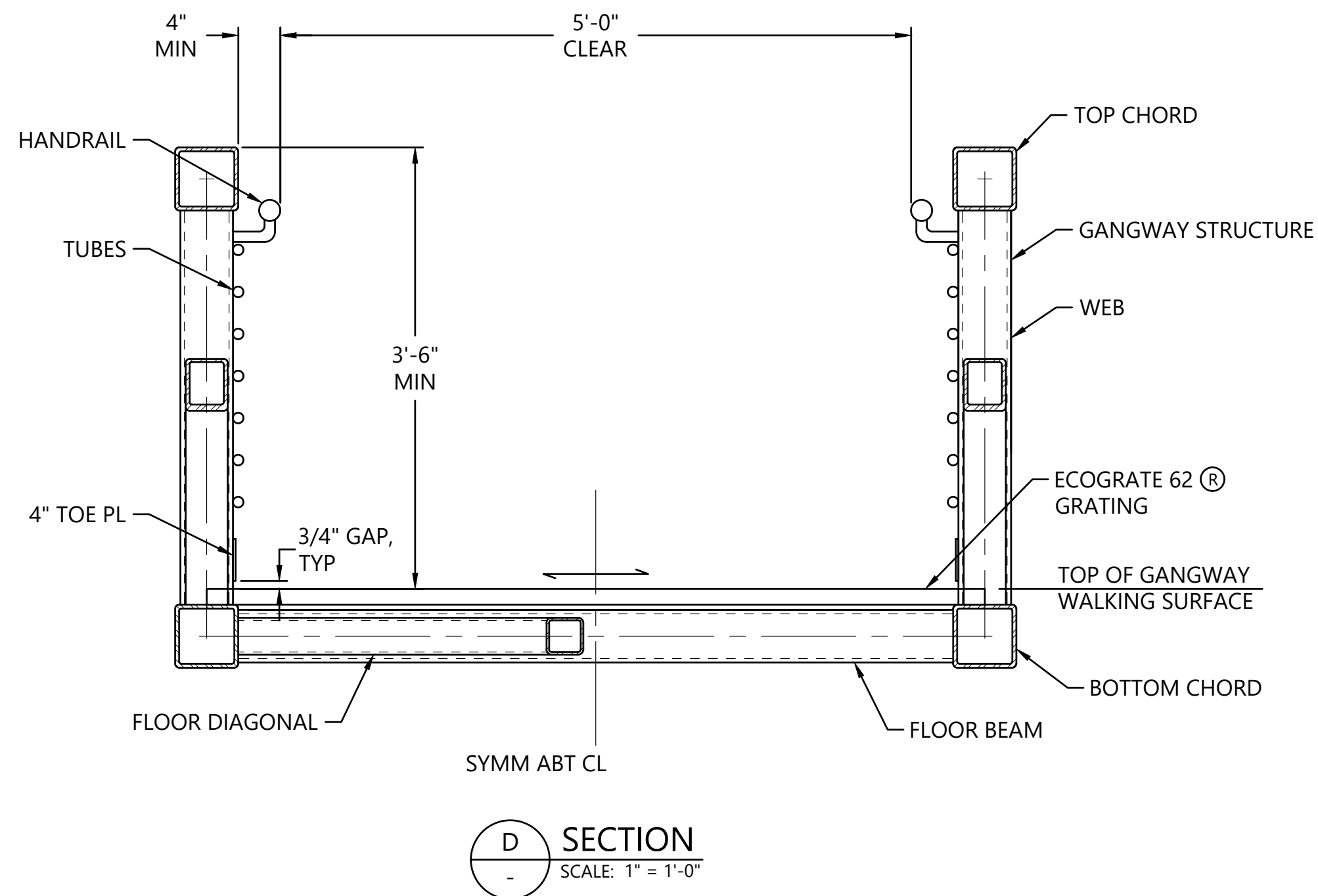
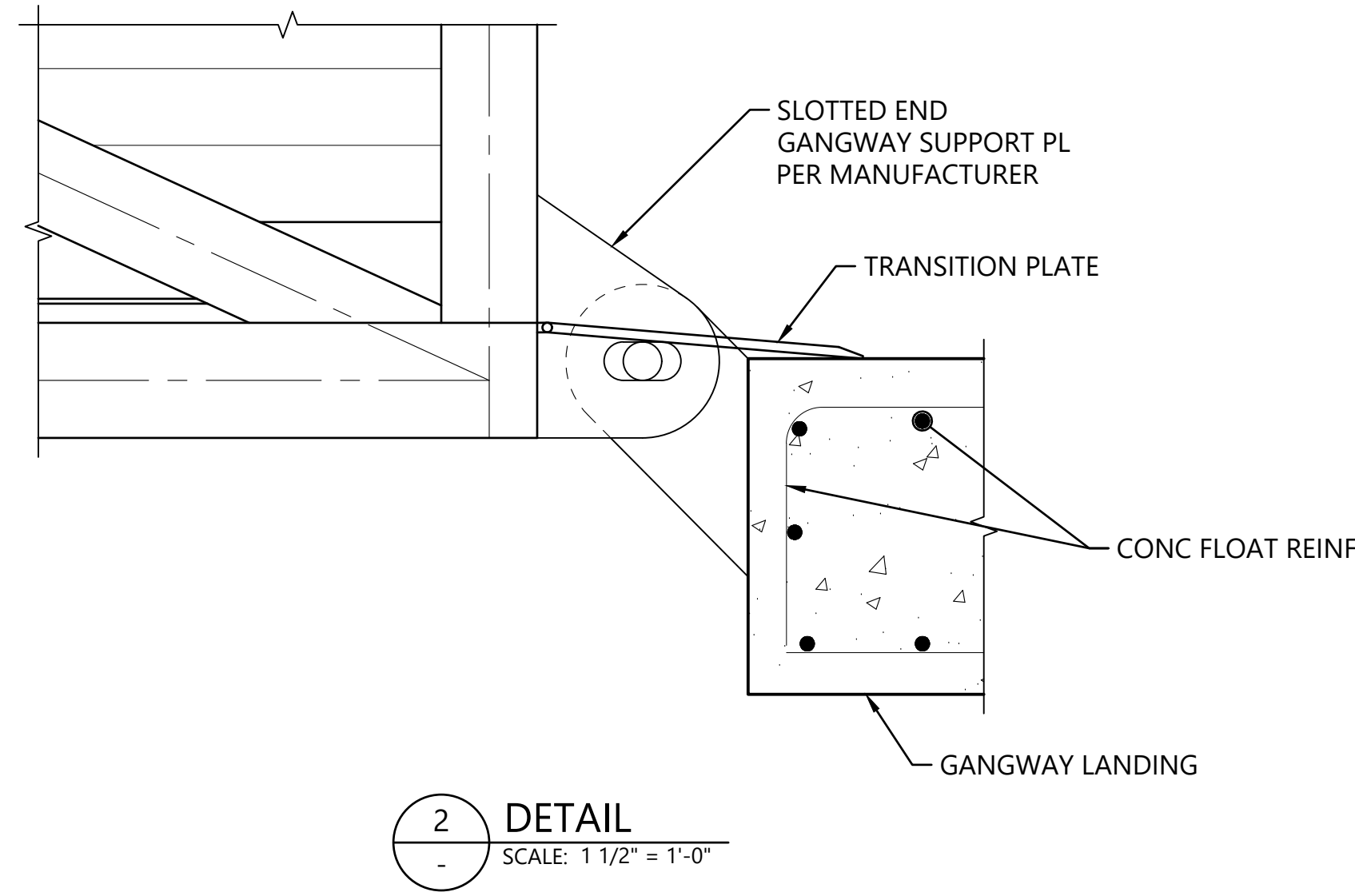
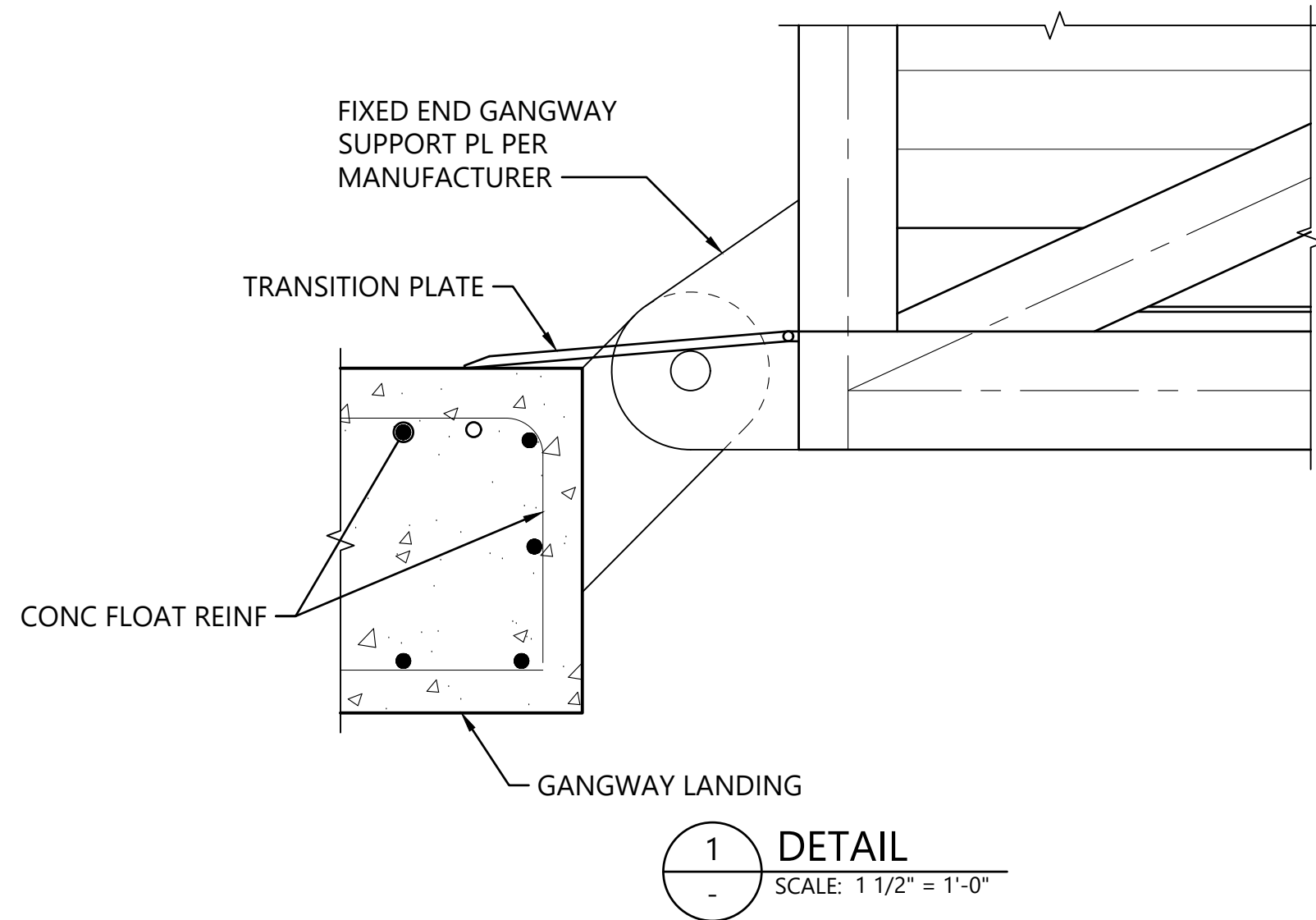
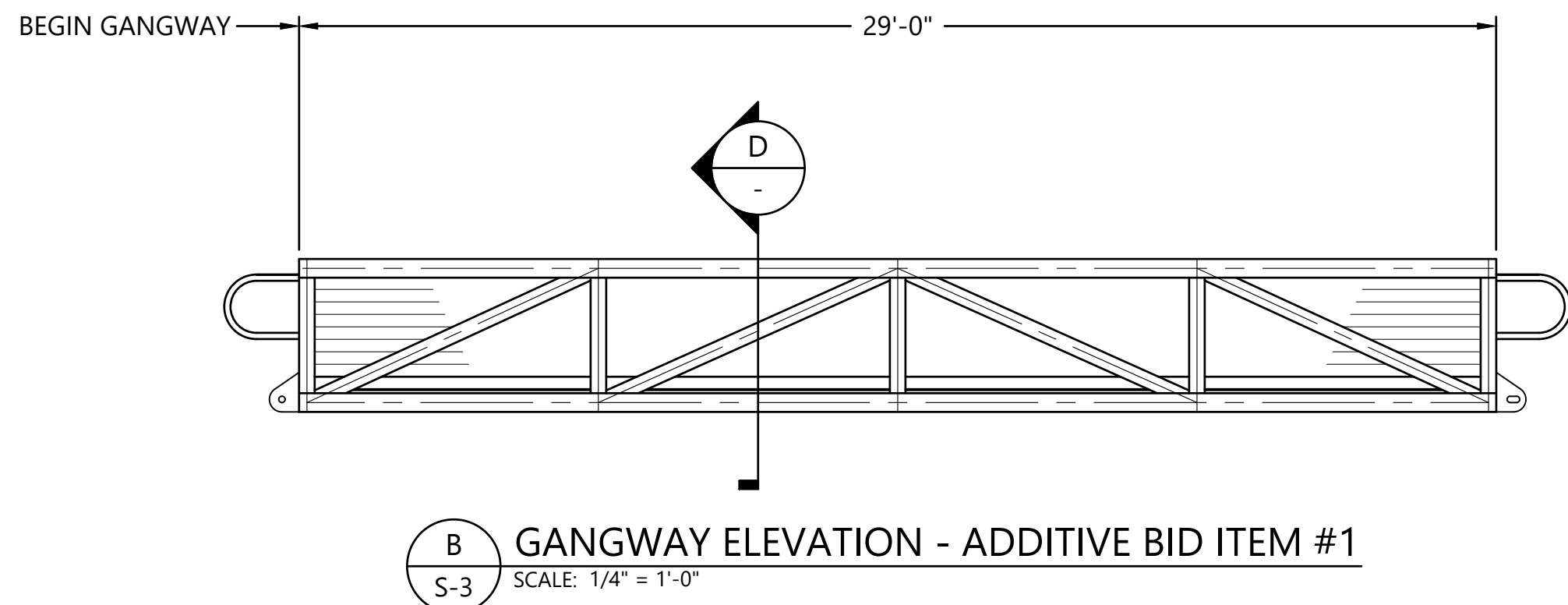
N:\2016\1600057 - Seattle Arboretum Waterfront Trail\Drawings\Current\08 GANGWAYS.dwg GANGWAYS

Mar 04, 2020 7:06pm arondan



NOTES:

1. GANGWAY ELEVATIONS AND DETAILS ARE FOR REFERENCE ONLY. CONTRACTOR SHALL PROVIDE STRUCTURAL CALCULATIONS AND SHOP DRAWINGS FOR EACH GANGWAY. GANGWAY DESIGN, SUPPORTS, AND TRANSITION PLATES SHALL BE ADA COMPLIANT.
2. DESIGN AND PROVIDE SKID PLATES AT THE LOWER ENDS OF EACH GANGWAY.
3. SEE SPECIFICATIONS FOR DESIGN REQUIREMENTS.



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WWW.CALL811.COM

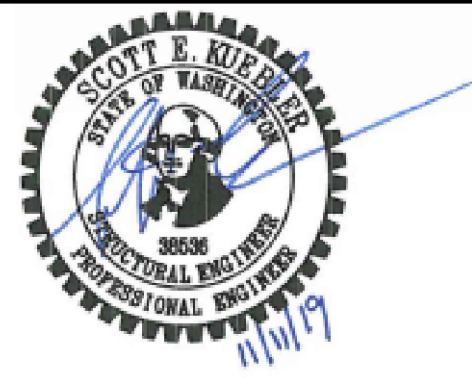
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NO.	REVISION -- AS BUILT	DATE

REVIEWED: _____ DATE _____
PARK ENGINEER
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kpff

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Parks & Recreation

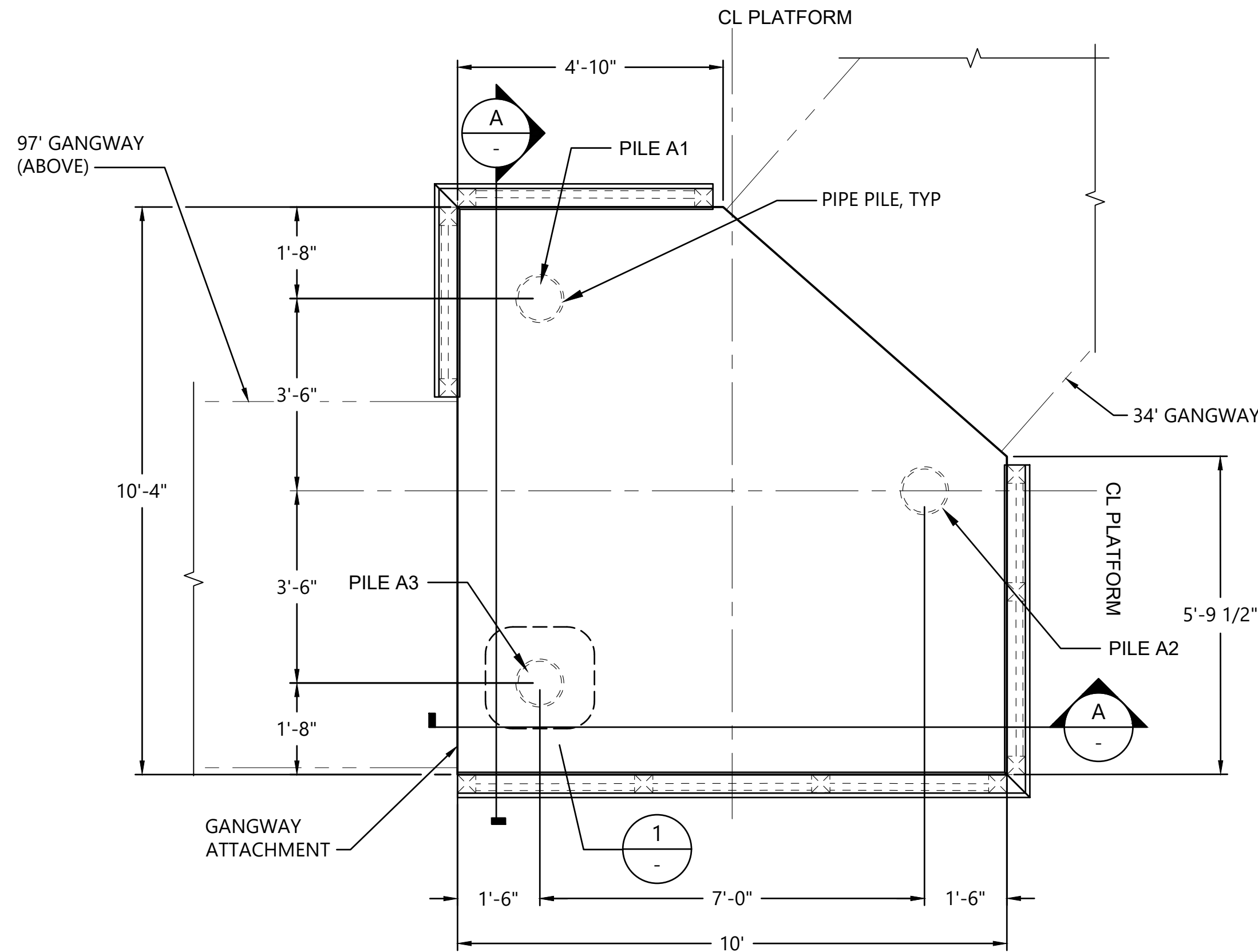
WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
GANGWAY ELEVATIONS
AND SECTIONS

DESIGNED AER
DRAWN TRL
CHECKED IDF
ORDINANCE NO. ORDINANCE
SPECIFICATION NO. CONTRACT
SCALE As Noted

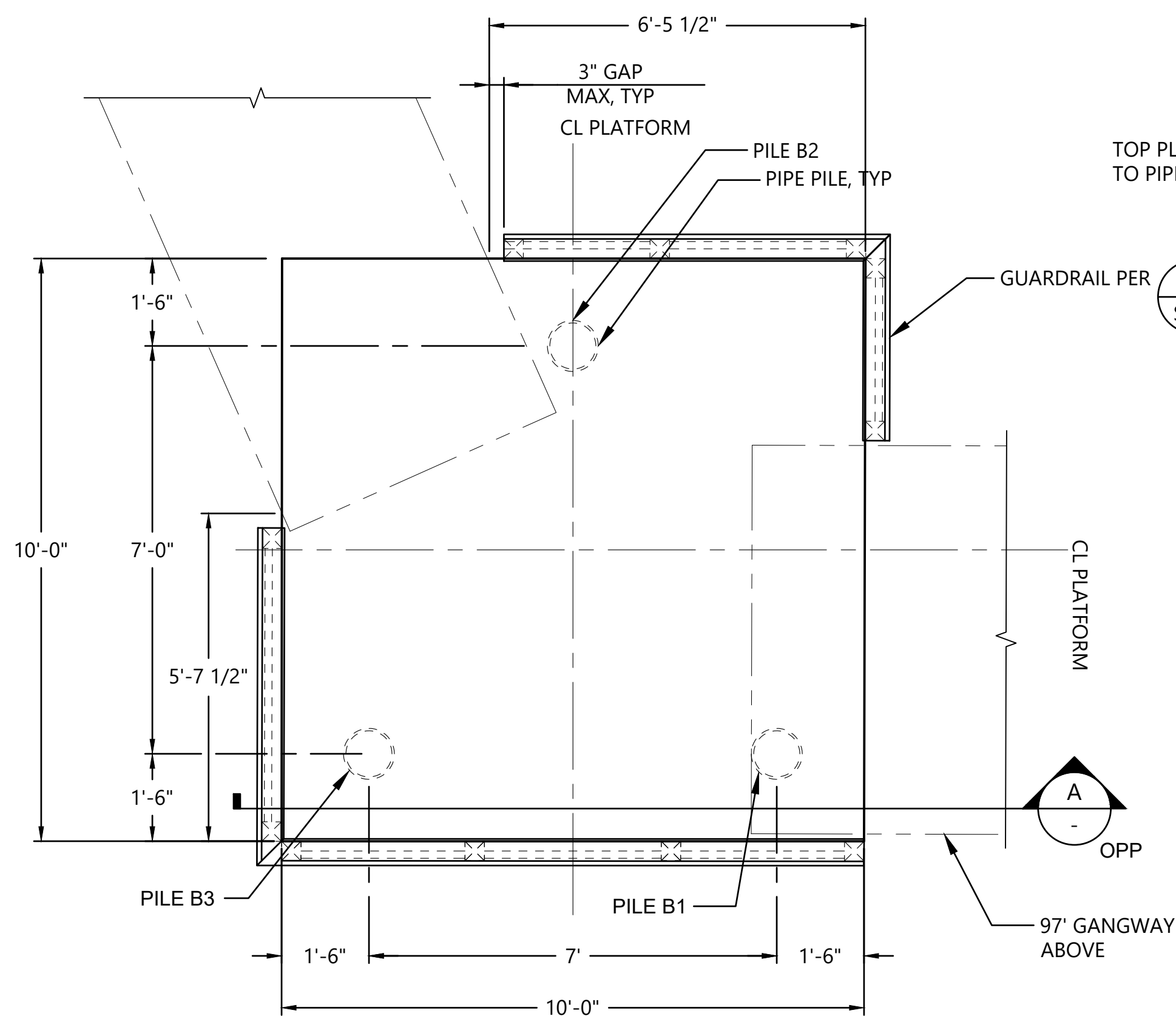
DATE
SHEET 22 OF 31
S-8

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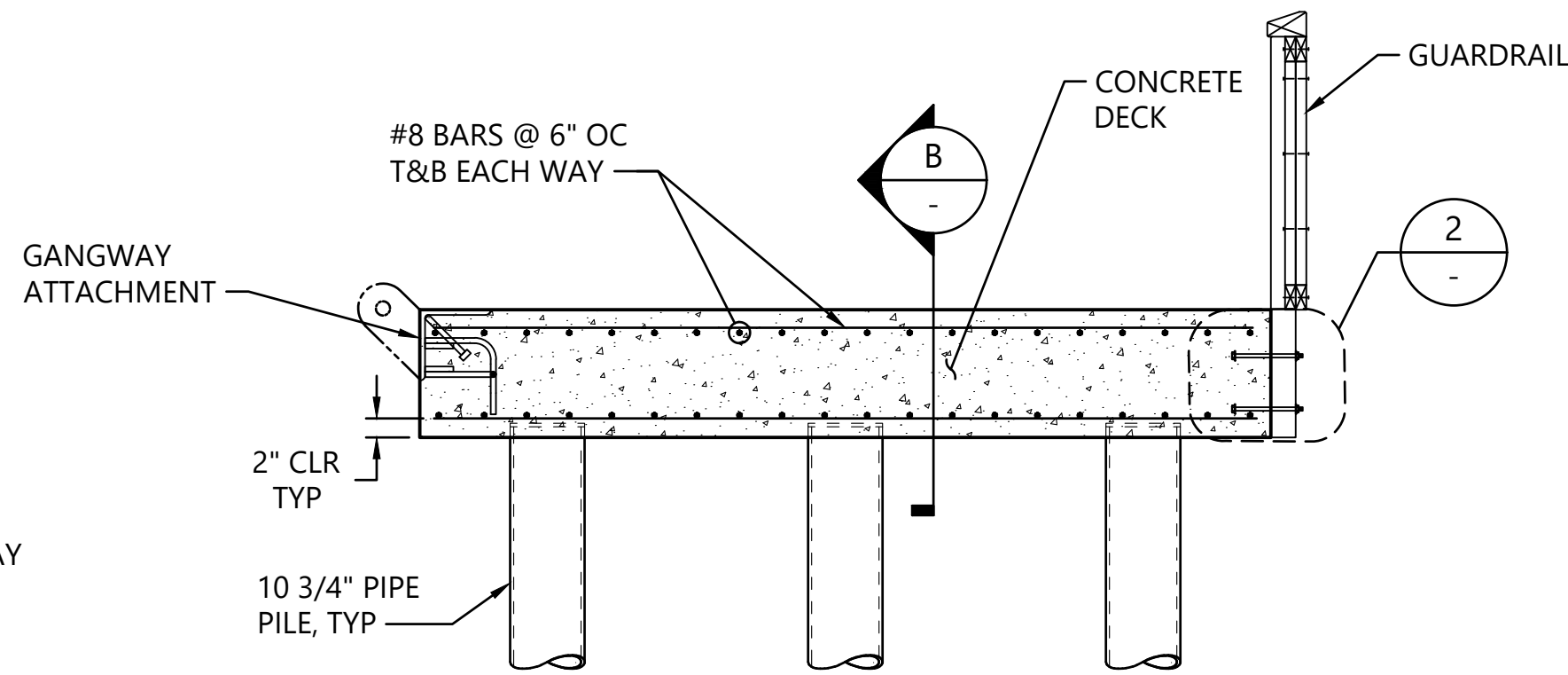
Mar 04, 2020 7:07pm arondn



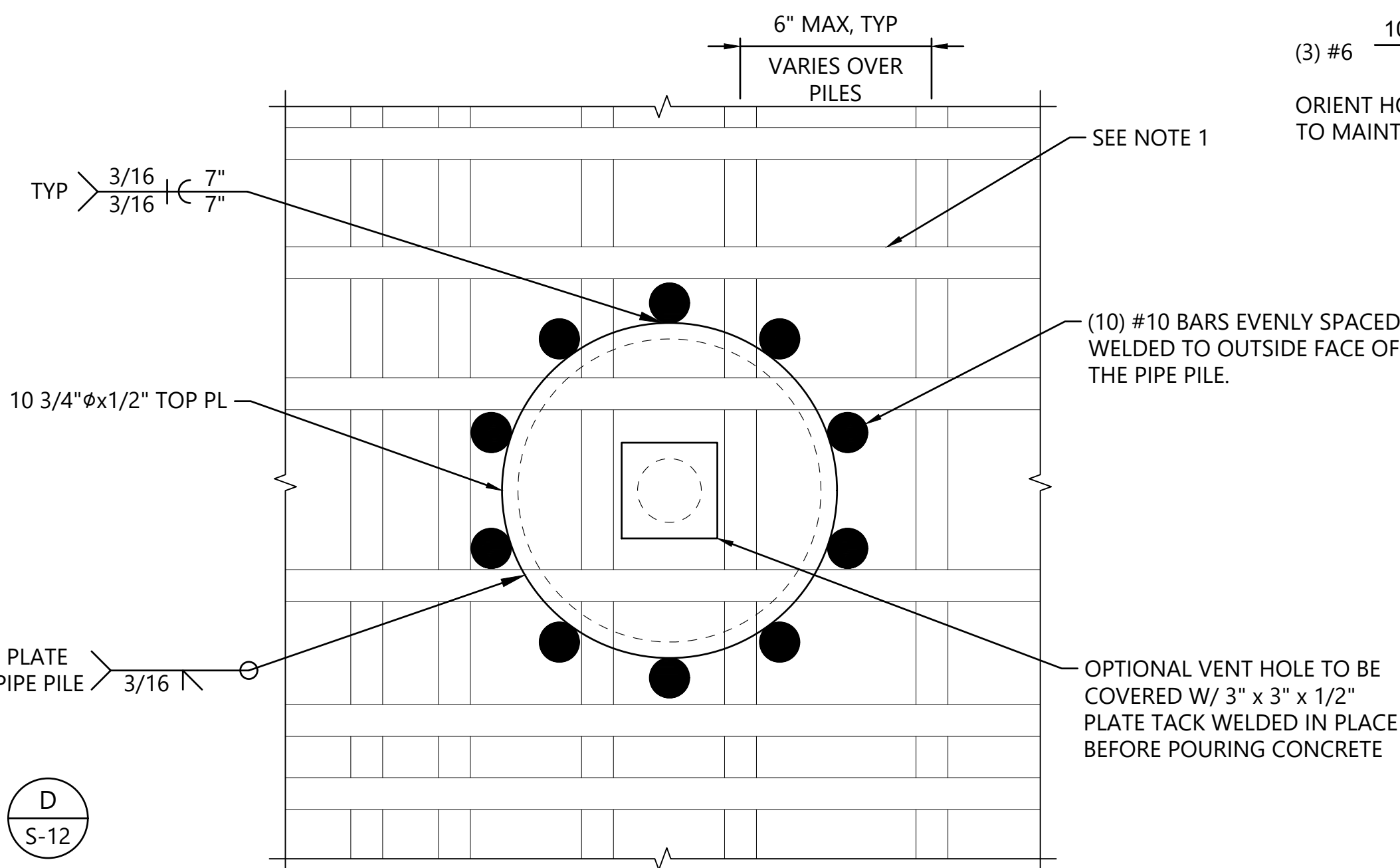
PLATFORM A PLAN
SCALE: 1/2" = 1'-0"



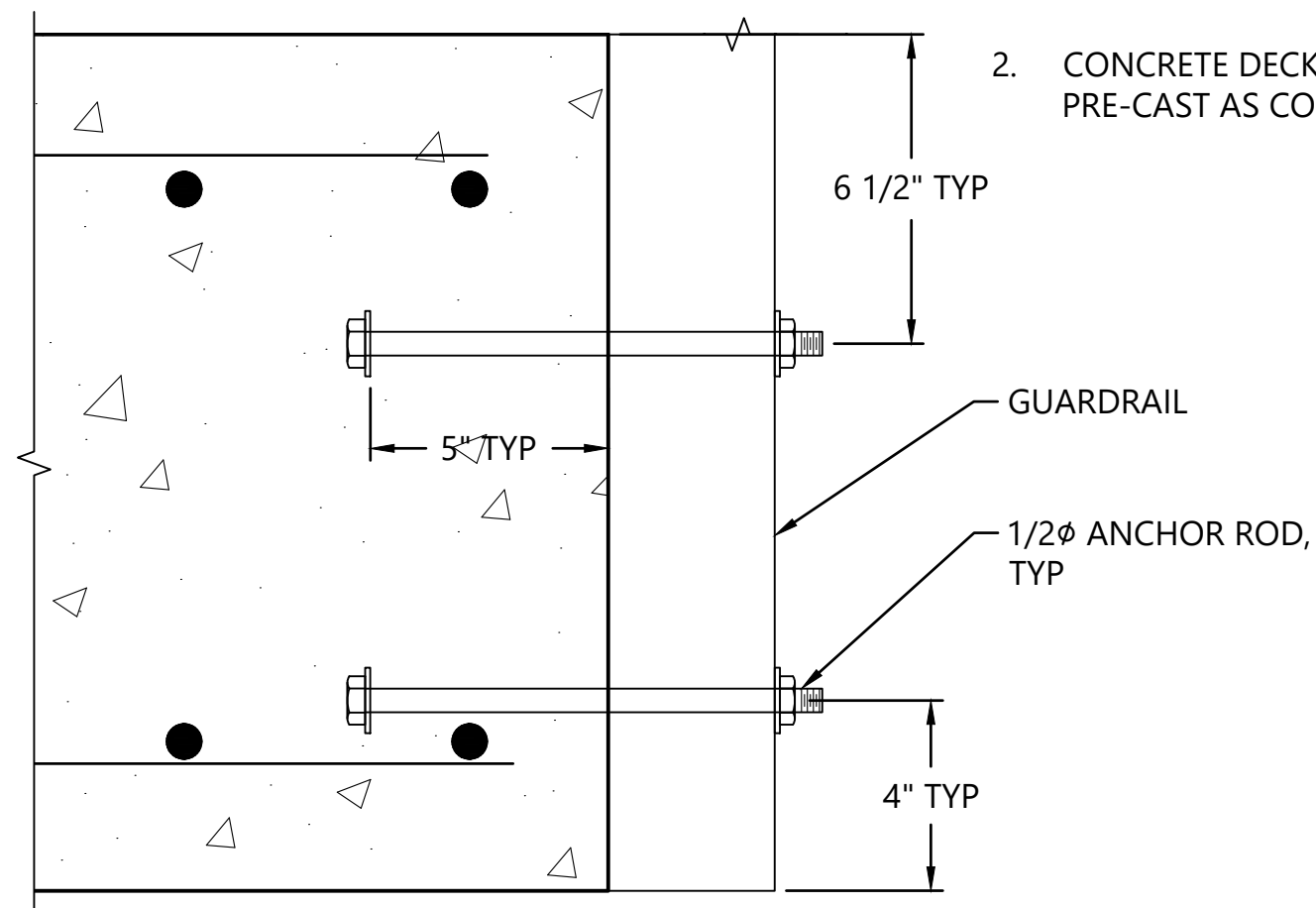
PLATFORM B PLAN
SCALE: 1/2" = 1'-0"



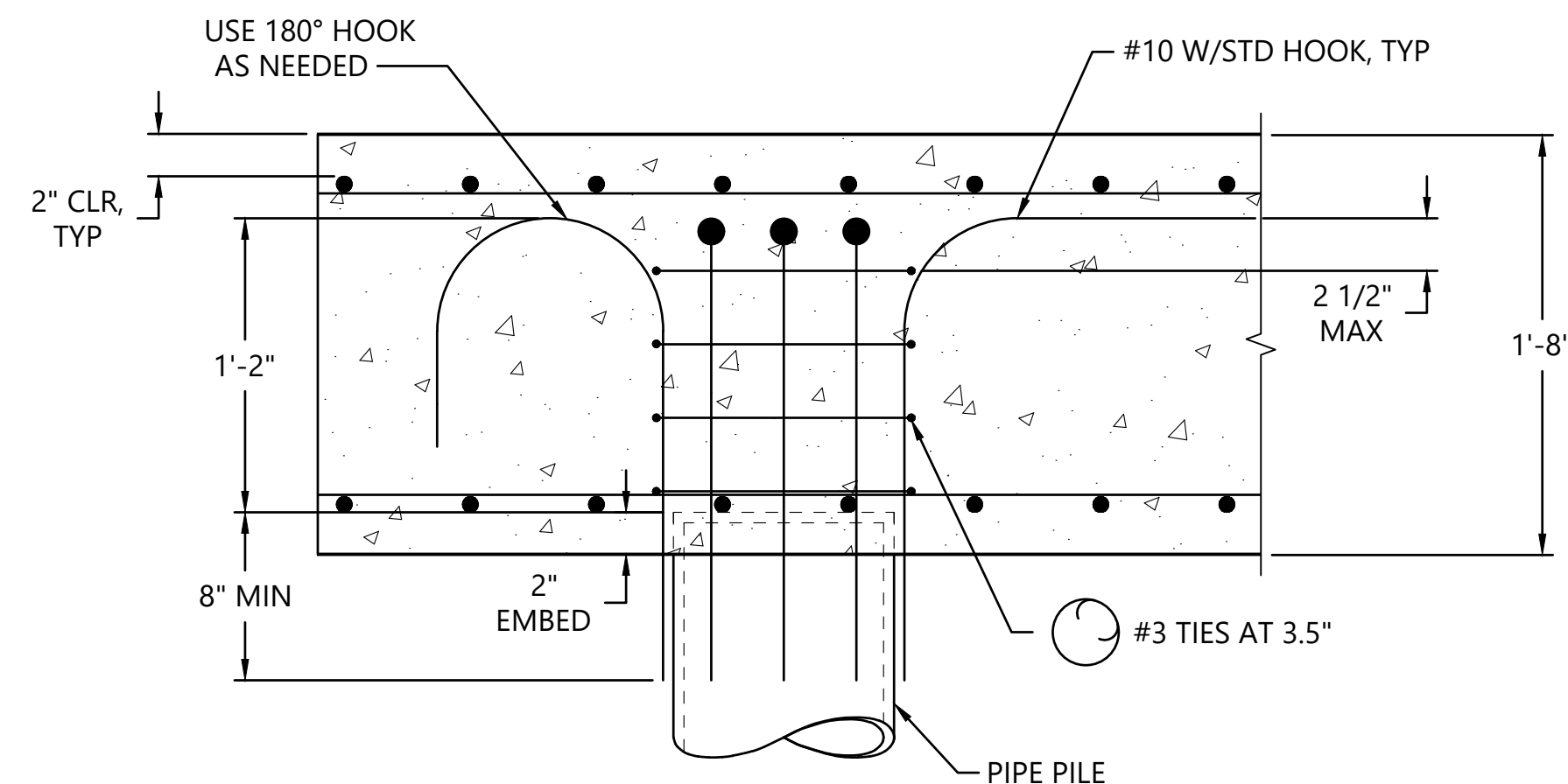
SECTION A
SCALE: 1/2" = 1'-0"



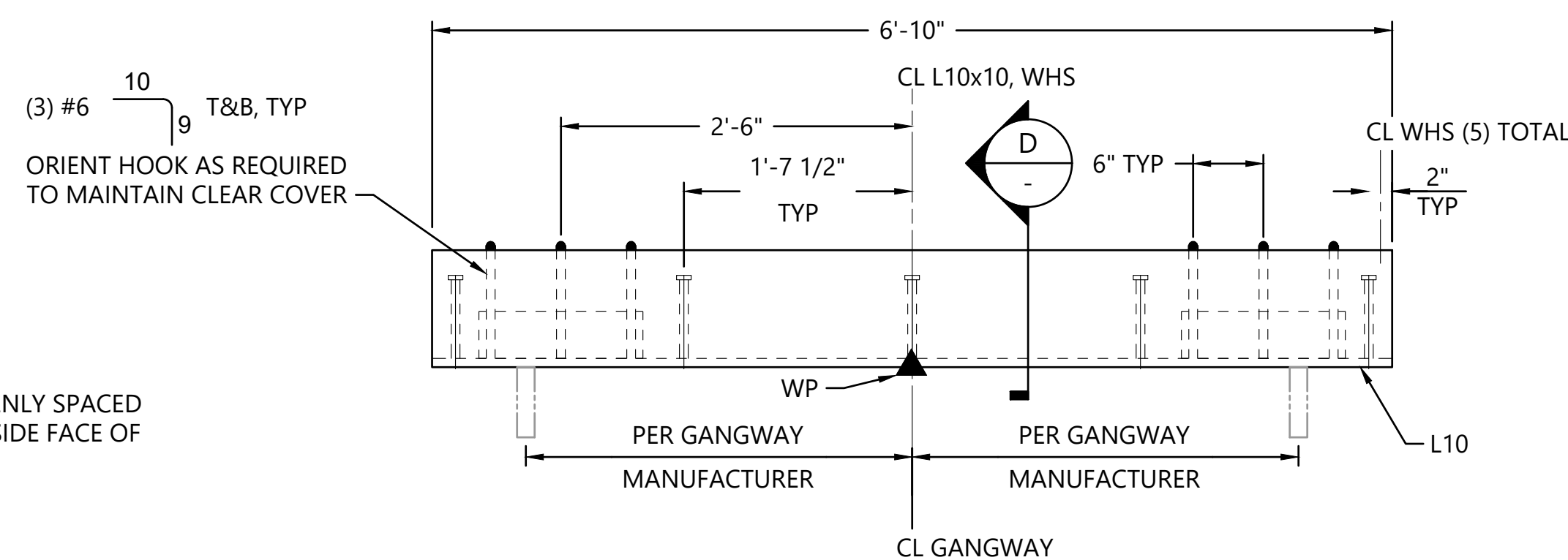
SECTION B
SCALE: 1" = 1'-0"



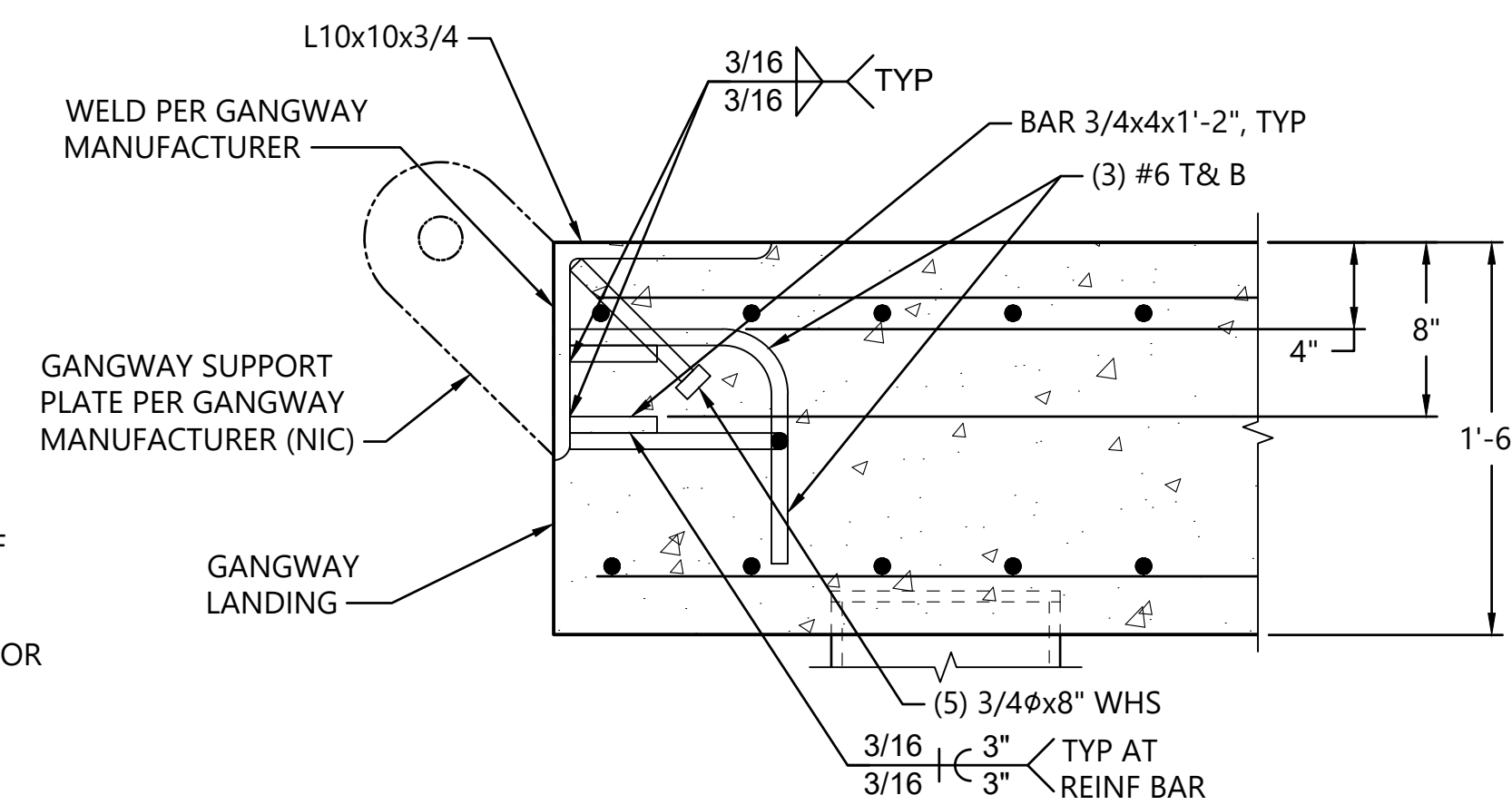
SECTION C
SCALE: 1" = 1'-0"



SECTION D
SCALE: 1" = 1'-0"



SECTION E
SCALE: 1" = 1'-0"



SECTION F
SCALE: 1 1/2" = 1'-0"

NOTES:

- CONTRACTOR TO COORDINATE SLAB REINF WITH PIPE PILE REBAR.
- CONCRETE DECK SHALL BE CAST-IN-PLACE OR PRE-CAST AS CONTRACTOR OPTION

PILE SCHEDULE					
PILE MARK	PILE SIZE	CUTOFF ELEV (ft) (NAVD 88)	TIP ELEV (ft) (NAVD 88)	REQ'D MIN. ALLOWABLE CAPACITY (kips)	
				COMPRESSION	TENSION
A1	10 3/4" DIA X 1/2"t	21	-63.00	80	35
A2	10 3/4" DIA X 1/2"t	21	-63.00	80	35
A3	10 3/4" DIA X 1/2"t	21	-63.00	80	35
B1	10 3/4" DIA X 1/2"t	21	-63.00	80	35
B2	10 3/4" DIA X 1/2"t	21	-63.00	80	35
B3	10 3/4" DIA X 1/2"t	21	-63.00	80	35

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NO.	REVISION -- AS BUILT	DATE

REVIEWED: _____ DATE _____
PARK ENGINEER
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Plans and Specifications in effect on the date shown above, and
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kpff

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Parks & Recreation

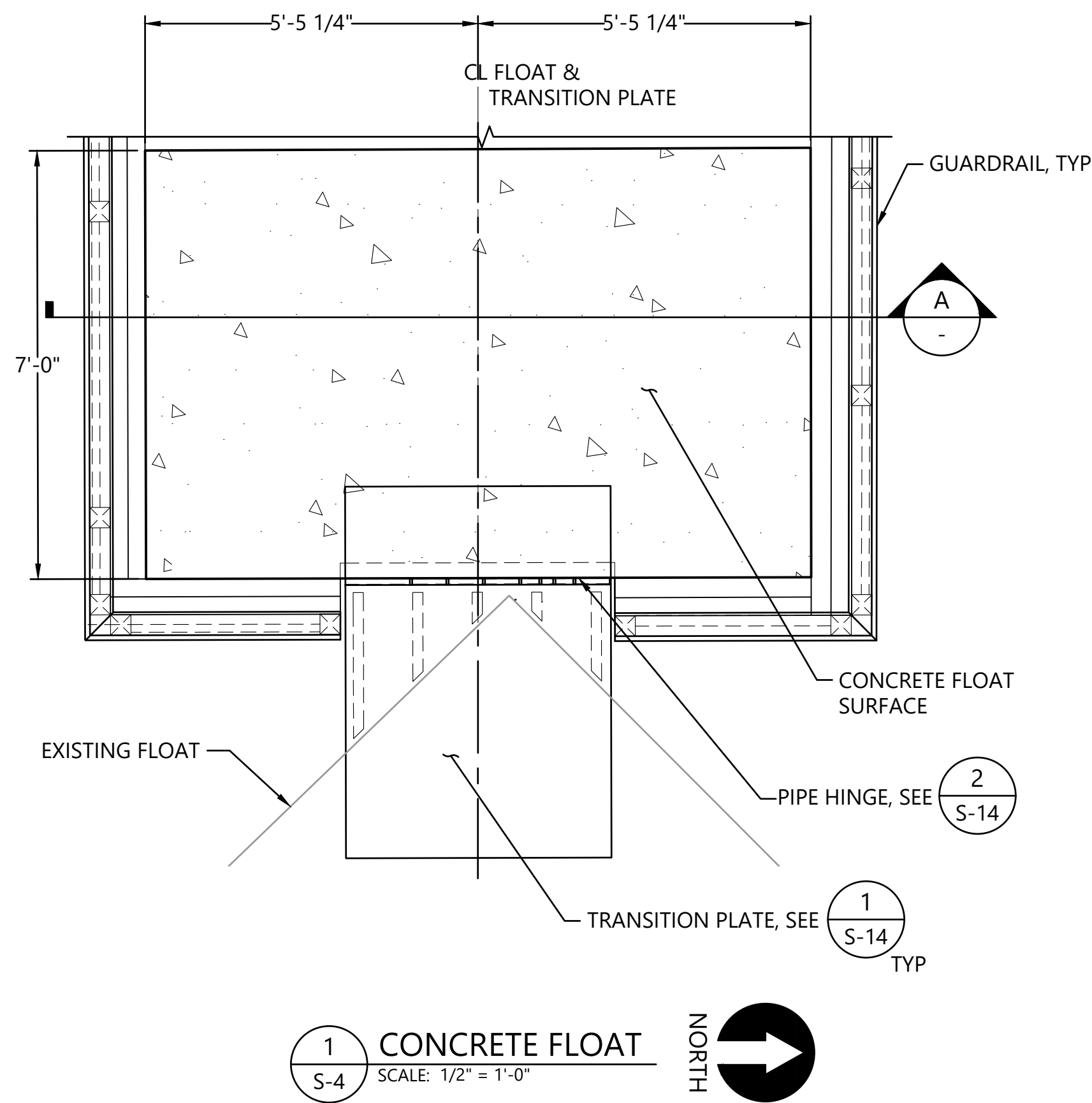
WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
PILE SUPPORTED PLATFORMS

DESIGNED: AER
DRAWN: TRL
CHECKED: IDF
ORDINANCE NO. ORDINANCE
SPECIFICATION NO. CONTRACT
SCALE: As Noted

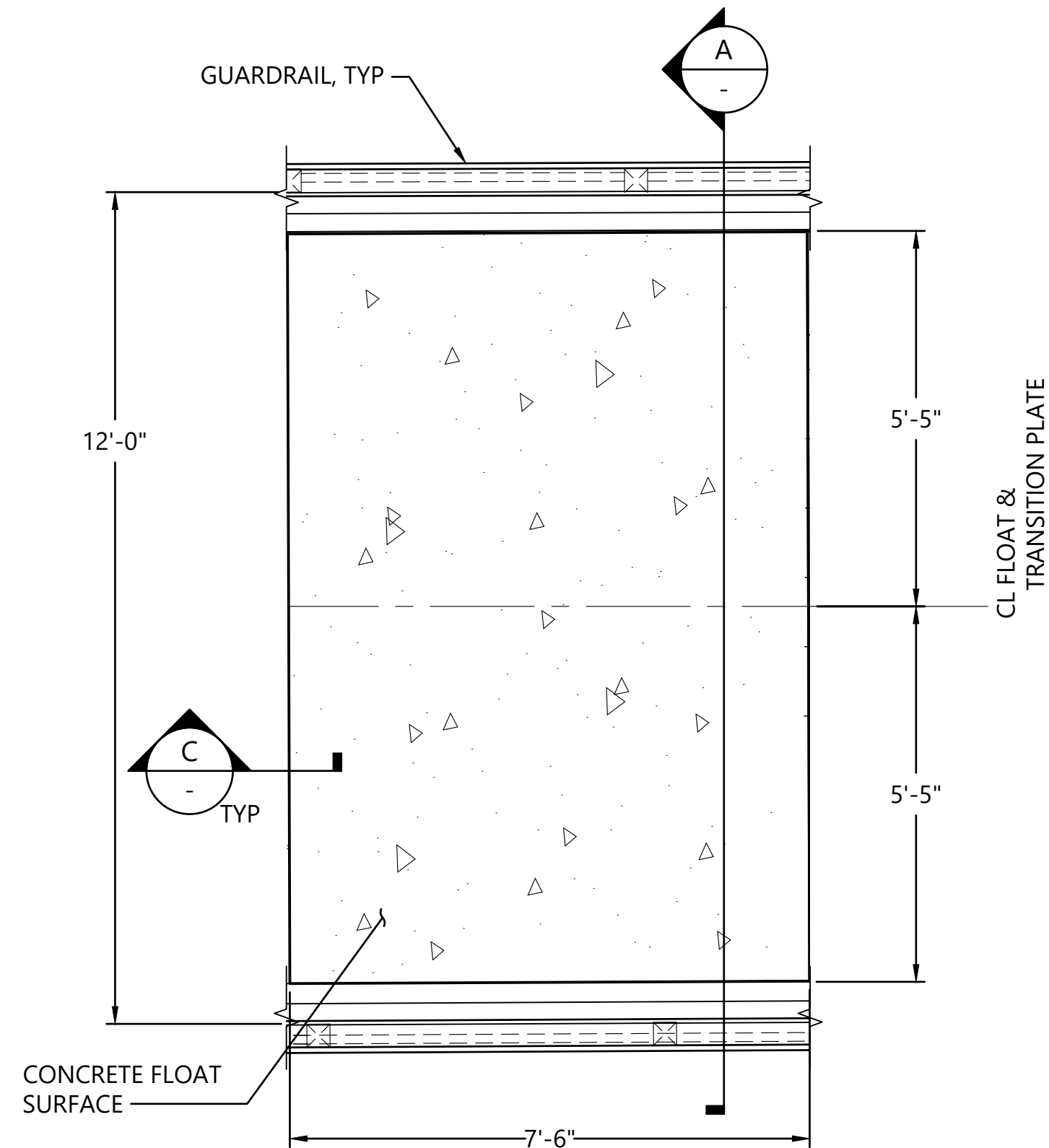
DATE
SHEET 23 OF 31
S-9

N:\2016\1600057 - Seattle Arboretum Waterfront Trail\Drawings\Current\10_TRANSIENT FLOAT.dwg TRANSIENT FLOAT

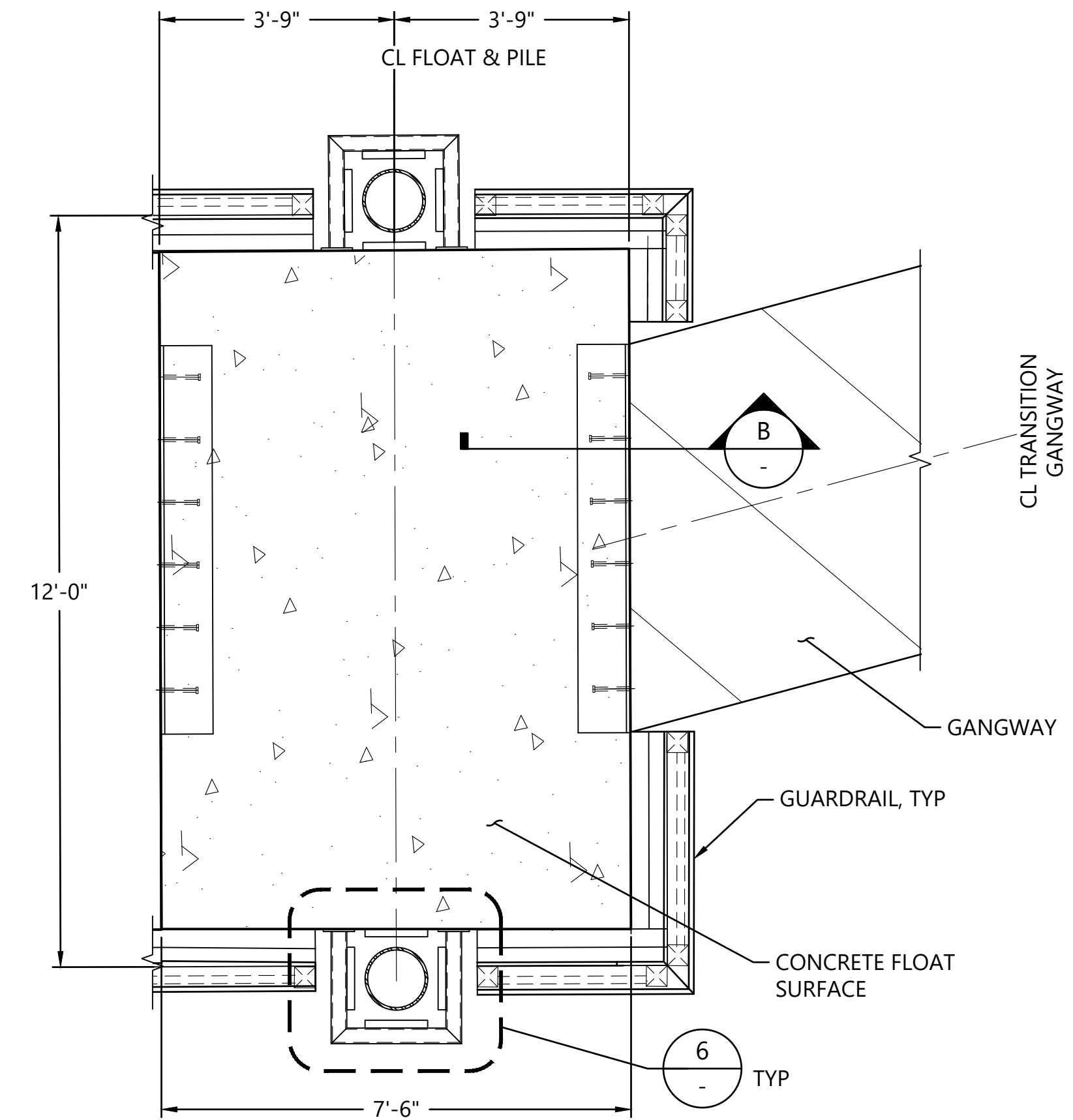
Mar 04, 2020 7:08pm arondin



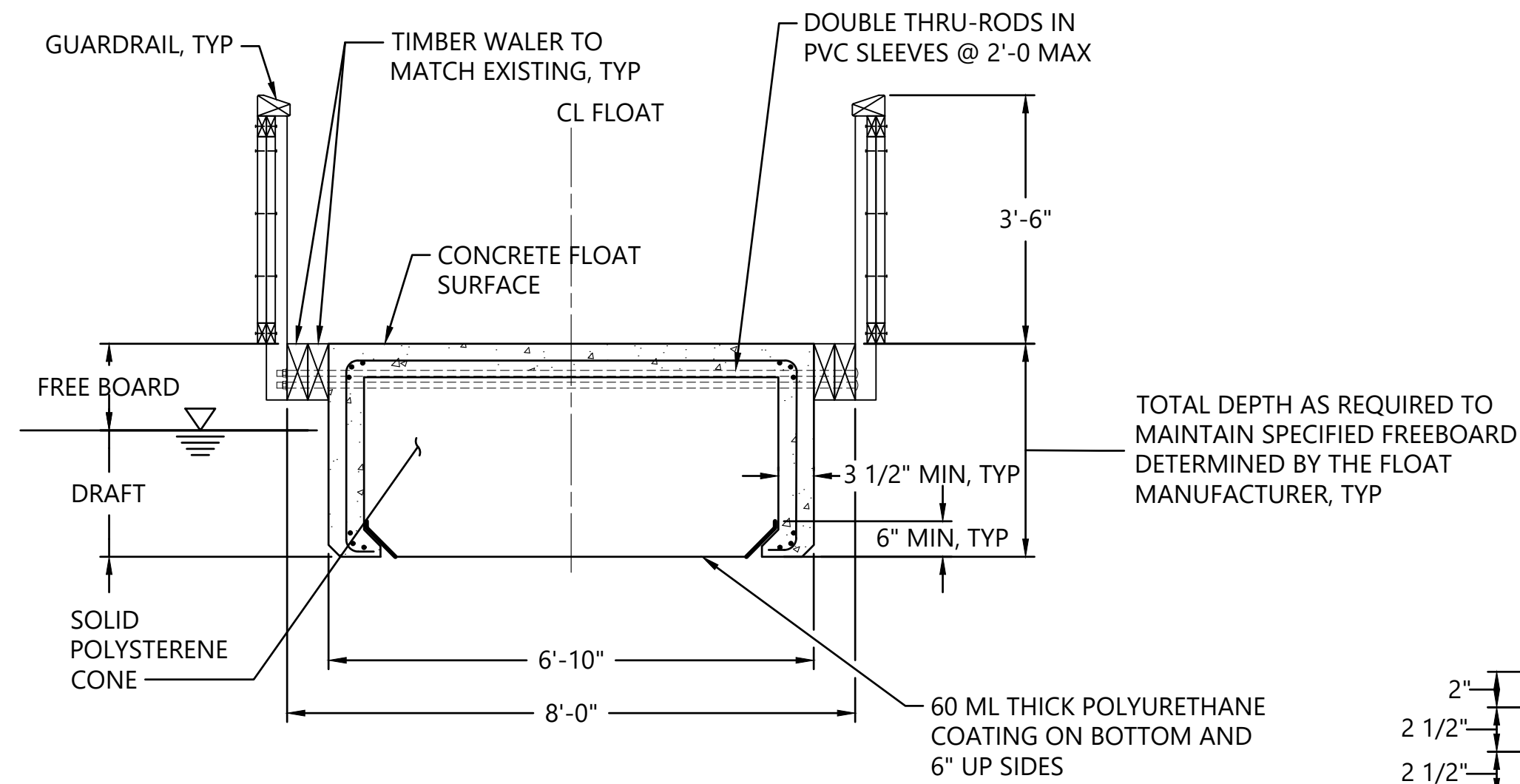
1 CONCRETE FLOAT
SCALE: 1/2" = 1'-0"



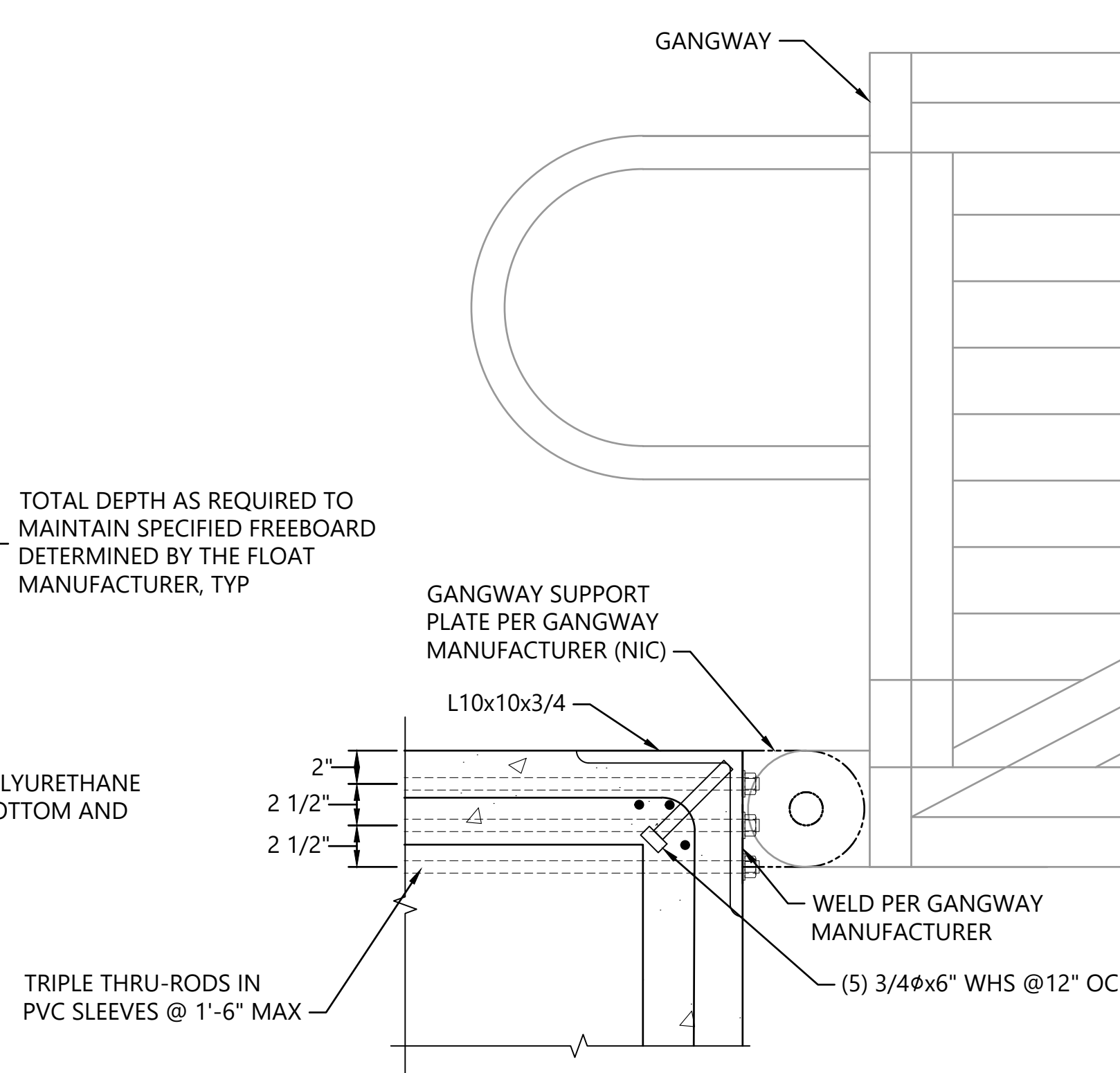
2 CONCRETE FLOAT
SCALE: 1/2" = 1'-0"



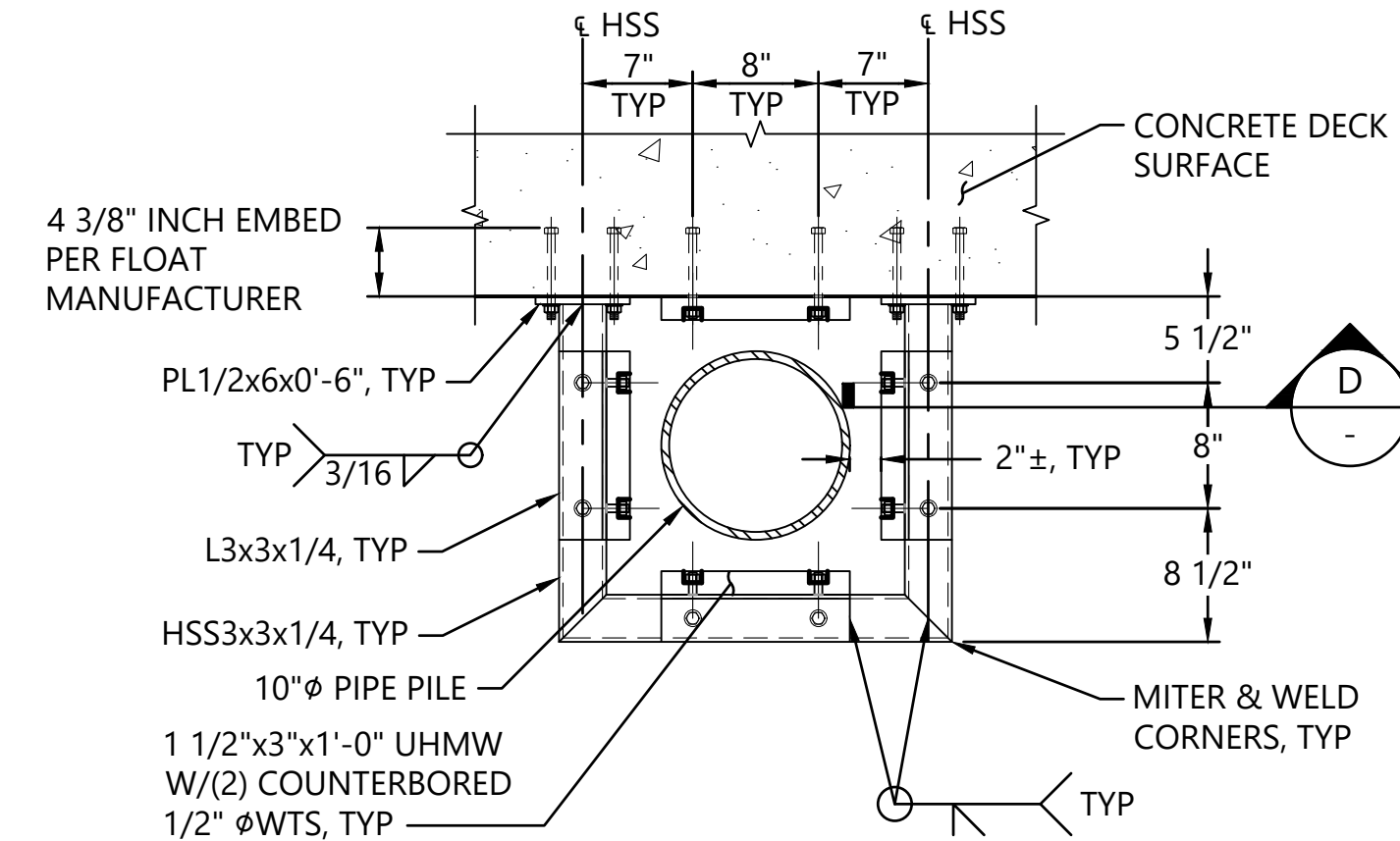
3 CONCRETE FLOAT
SCALE: 1/2" = 1'-0"



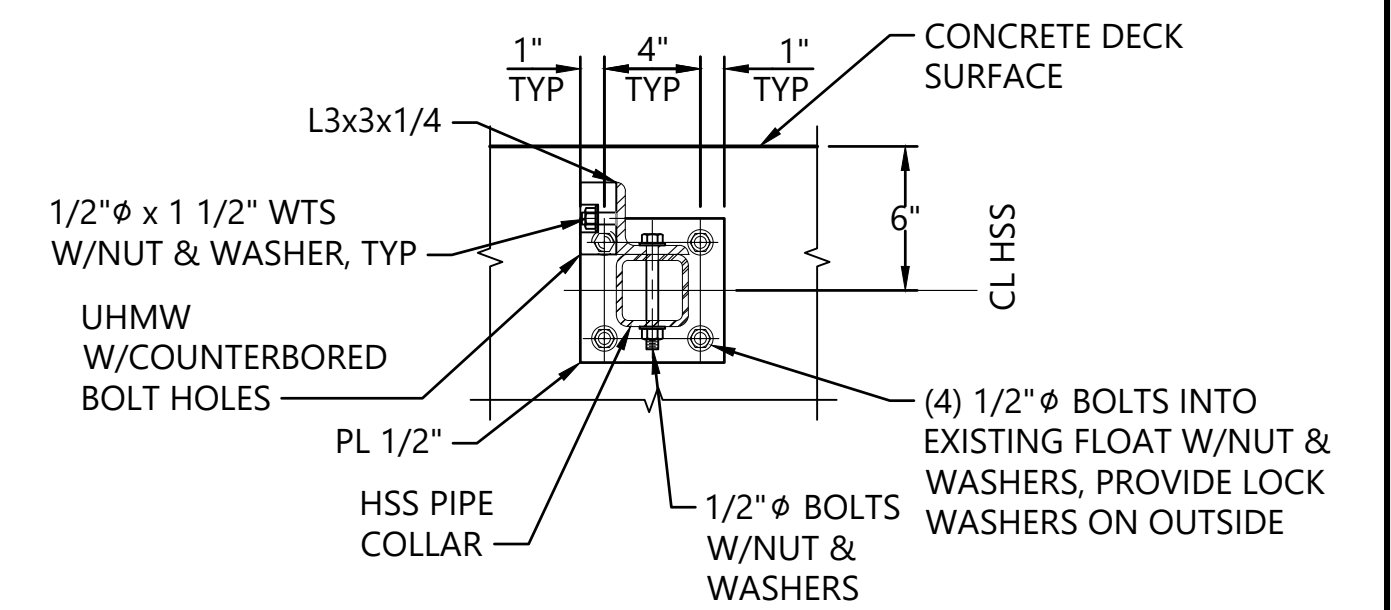
A SECTION
SCALE: 1/2" = 1'-0"



B SECTION
SCALE: 1 1/2" = 1'-0"



6 DETAIL
SCALE: 1" = 1'-0"



D SECTION
SCALE: 1 1/2" = 1'-0"

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Also, verify all underground utilities not located by the
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call SPR Inspection Request Line (206) 684-7034.

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NO.	REVISION -- AS BUILT	DATE

REVIEWED: _____ DATE _____
PARK ENGINEER
All work done in accordance with the City of Seattle Standard
Plans and Specifications in effect on the date shown above, and
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kpff

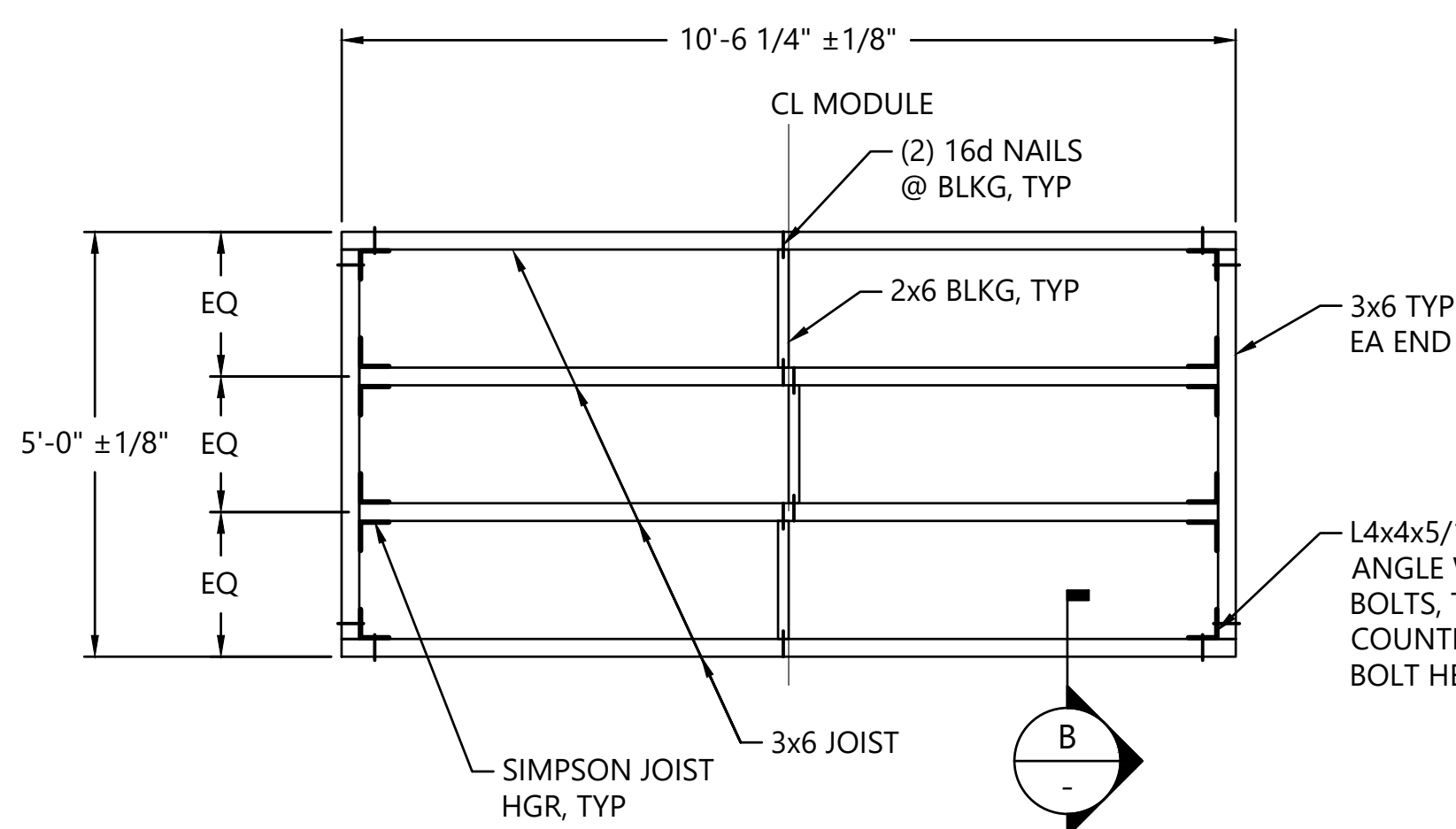
2407 North 31st Street, Suite 100
Tacoma, Washington 98407
(253) 396-0150 Fax (253) 396-0162

Seattle
Parks & Recreation

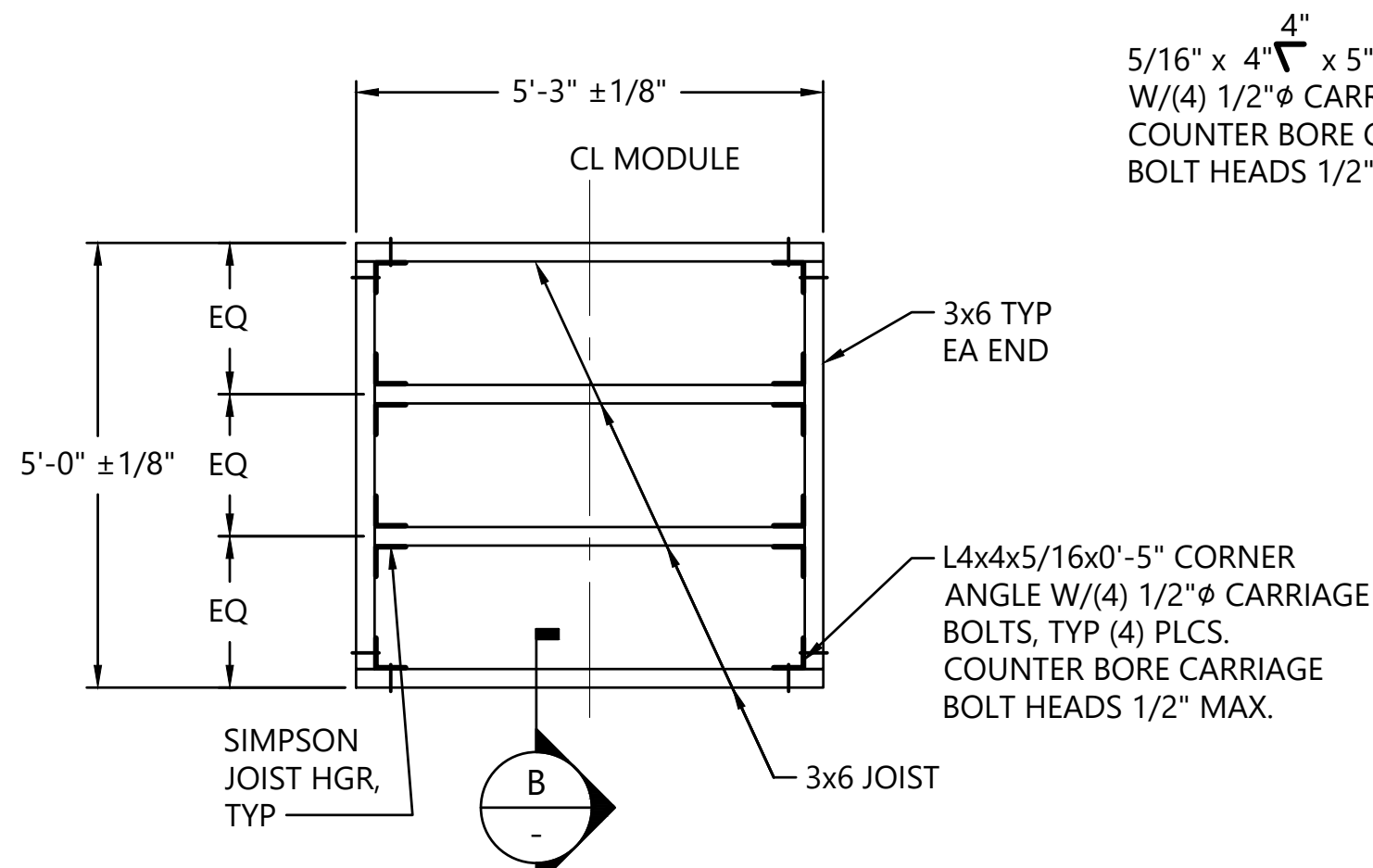
WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
TRANSIENT FLOAT DETAILS

DESIGNED AER
DRAWN TRL
CHECKED IDF
ORDINANCE NO. ORDINANCE
SPECIFICATION NO. CONTRACT
SCALE As Noted

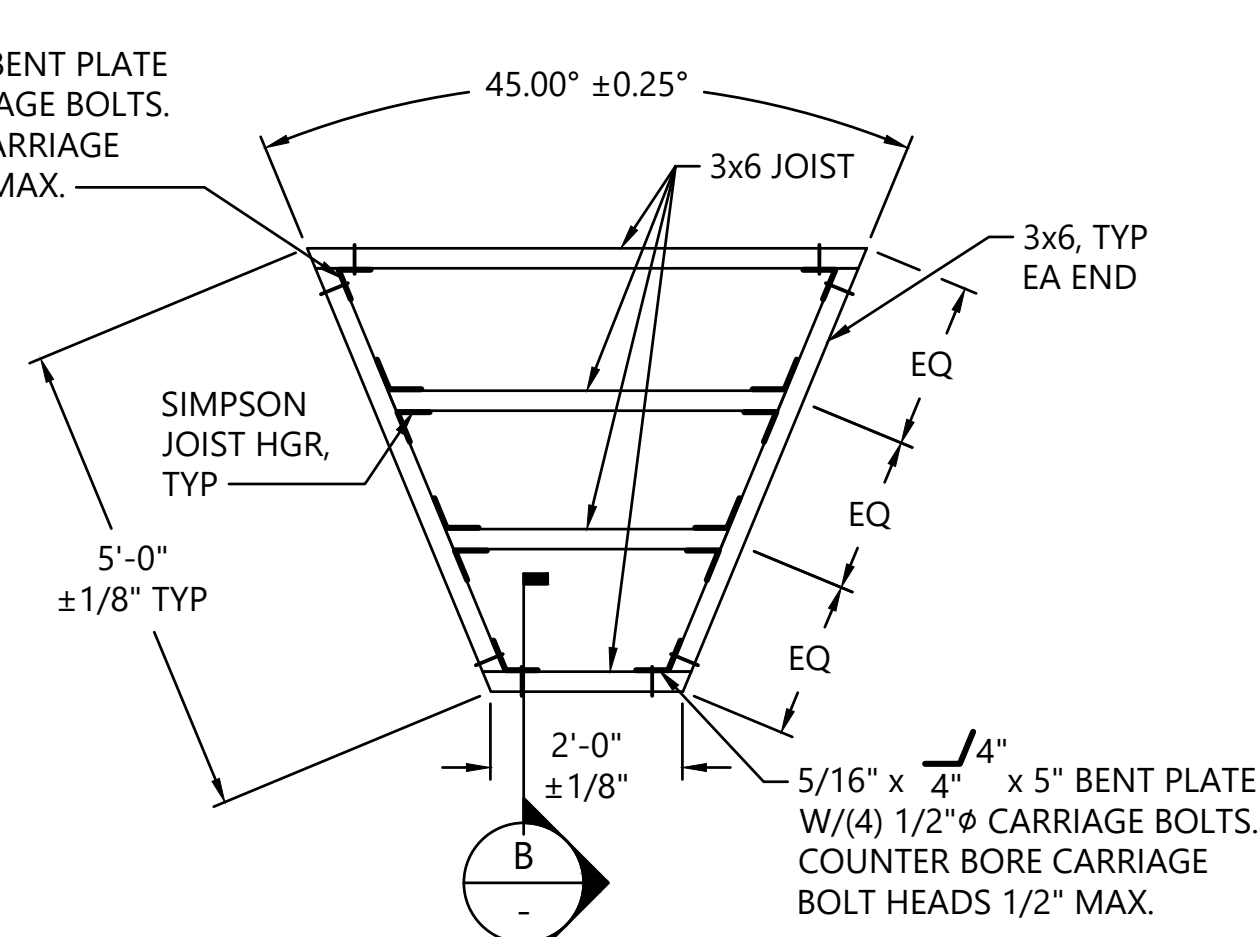
DATE
SHEET 24 OF 31
S-10



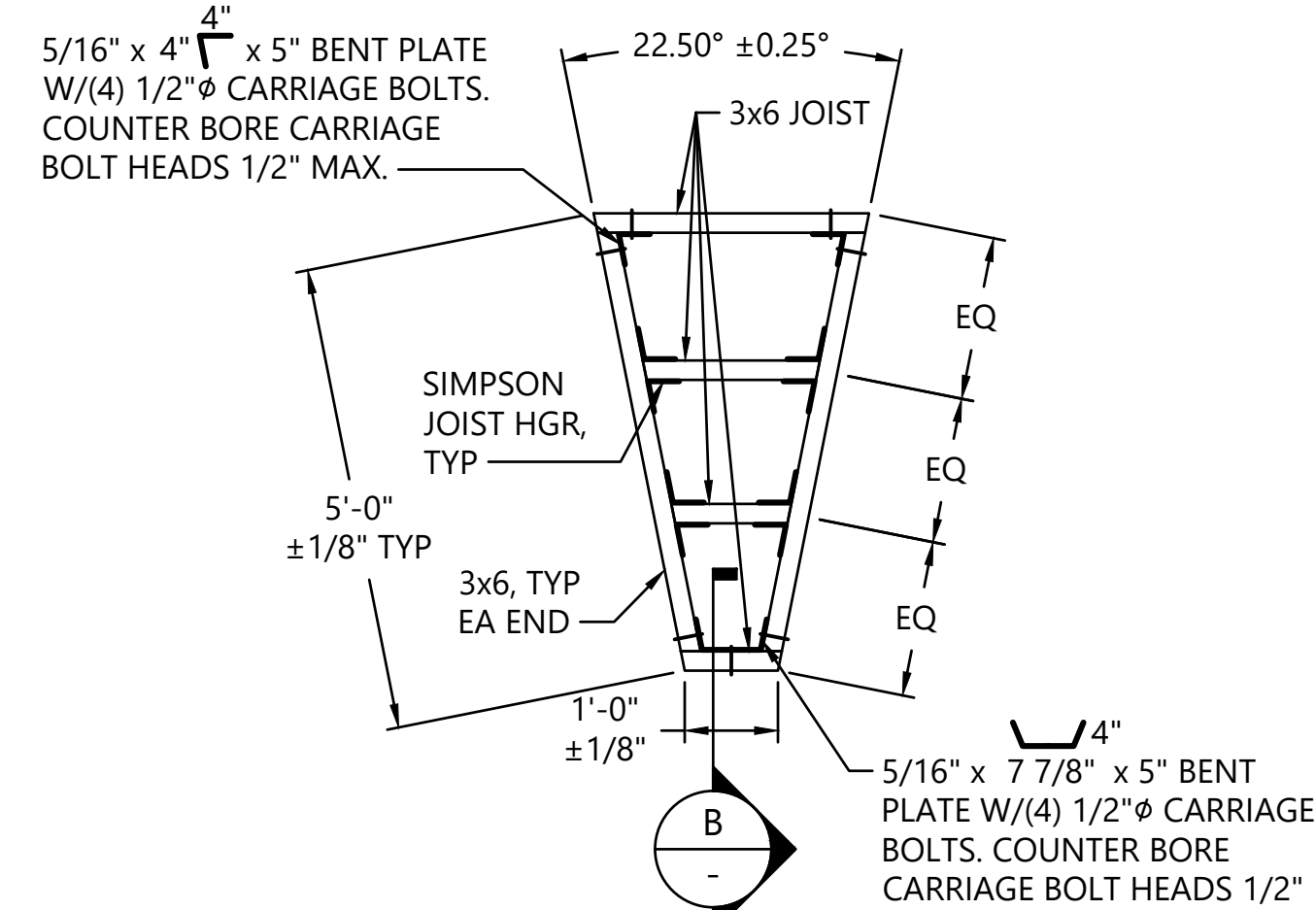
1 10 FOOT STRAIGHT MODULE
SCALE: 1/2" = 1'-0"



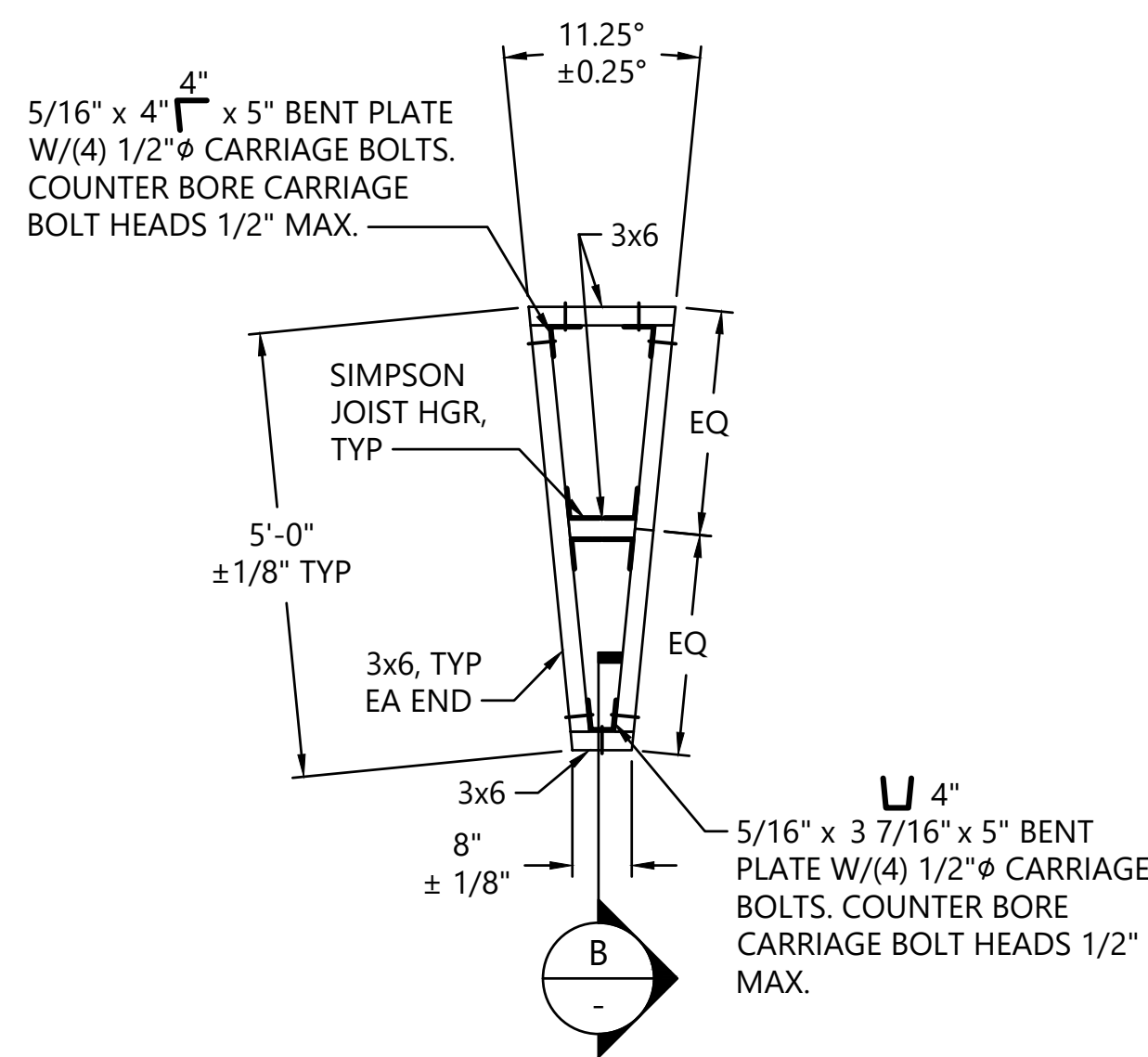
2 FRAMING PLAN 5 FOOT STRAIGHT MODULE
SCALE: 1/2" = 1'-0"



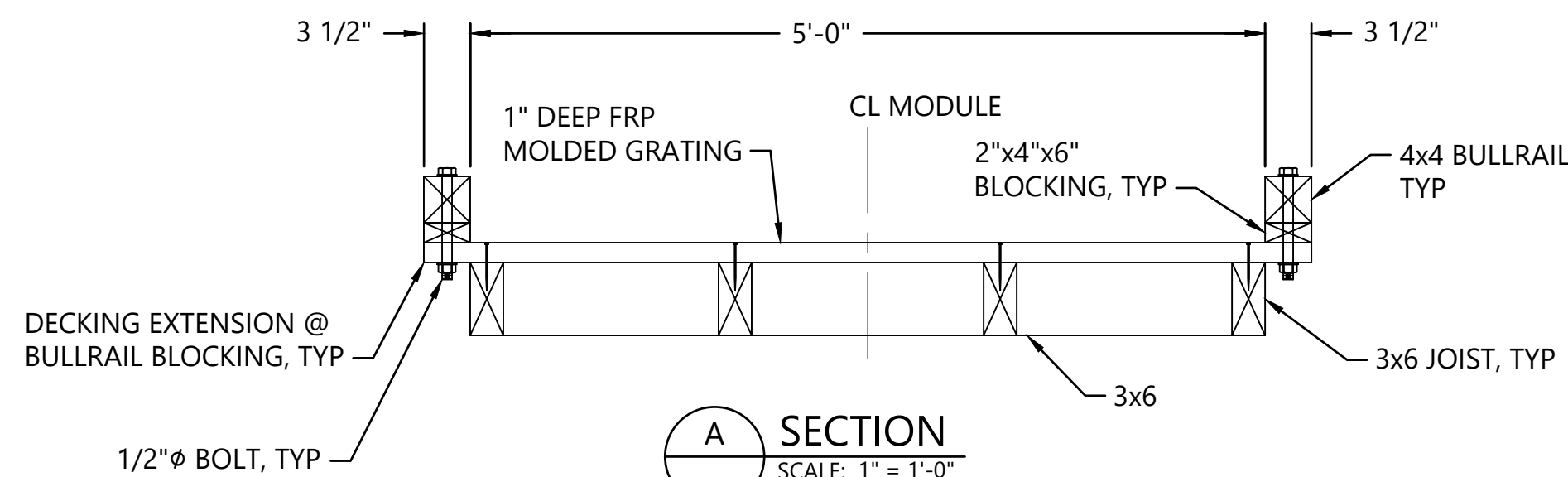
3 FRAMING PLAN 45 DEGREE WEDGE MODULE
SCALE: 1/2" = 1'-0"



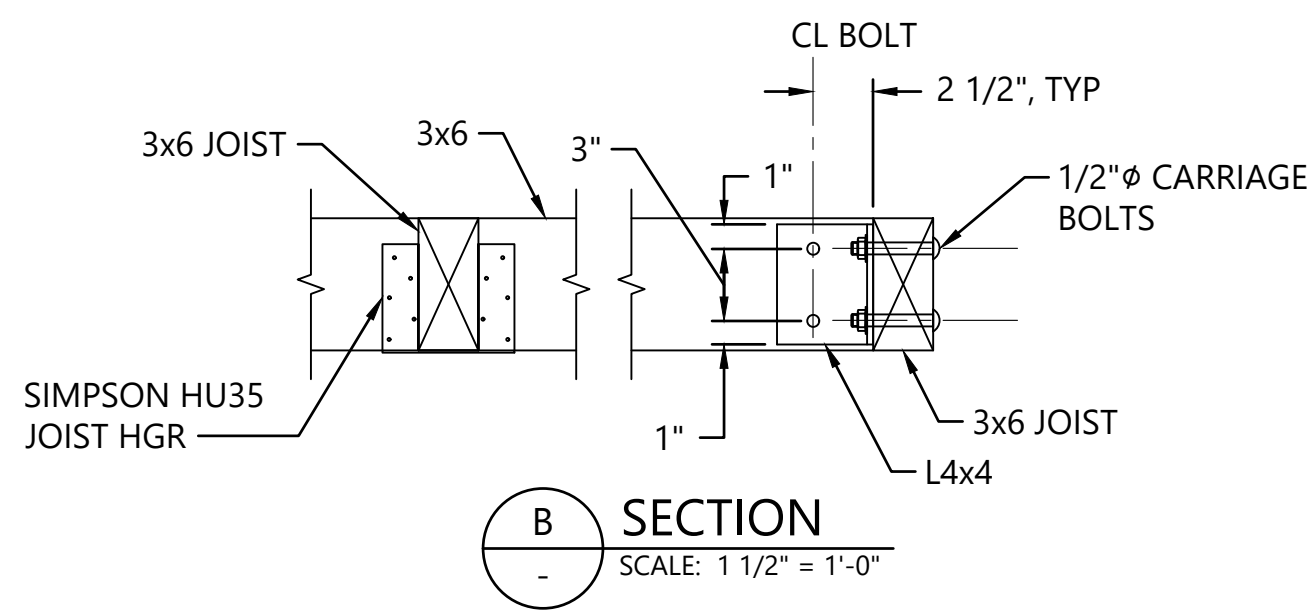
4 FRAMING PLAN 22.5 DEGREE WEDGE MODULE
SCALE: 1/2" = 1'-0"



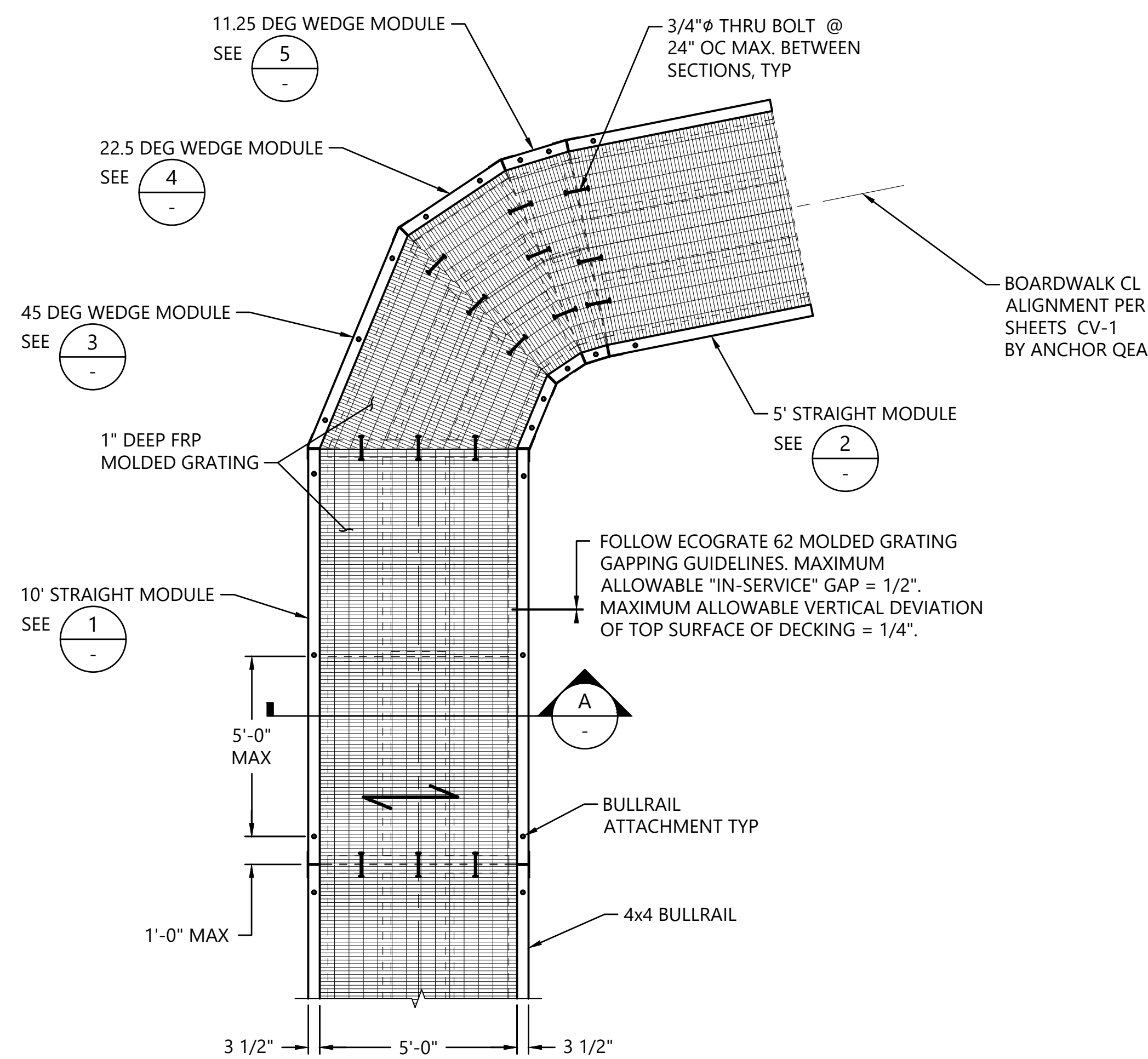
5 FRAMING PLAN 11.25 DEGREE WEDGE MODULE
SCALE: 1/2" = 1'-0"



A SECTION
SCALE: 1" = 1'-0"



B SECTION
SCALE: 1 1/2" = 1'-0"



6 TYPICAL DECK PLAN
PRE-ASSEMBLED BOARDWALK MODULE
SCALE: 3/8" = 1'-0"

100% SUBMITTAL - NOT FOR CONSTRUCTION

>>>>CAUTION - CALL 811<<<<
UTILITY NOTIFICATION CENTER
BEFORE YOU DIG!
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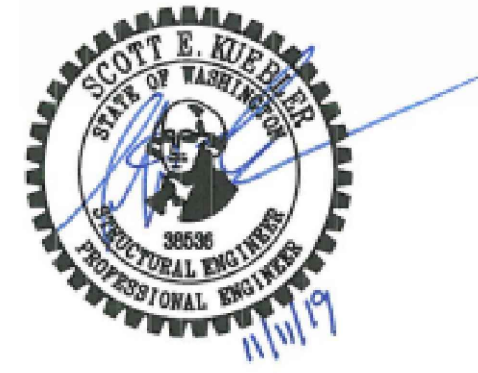
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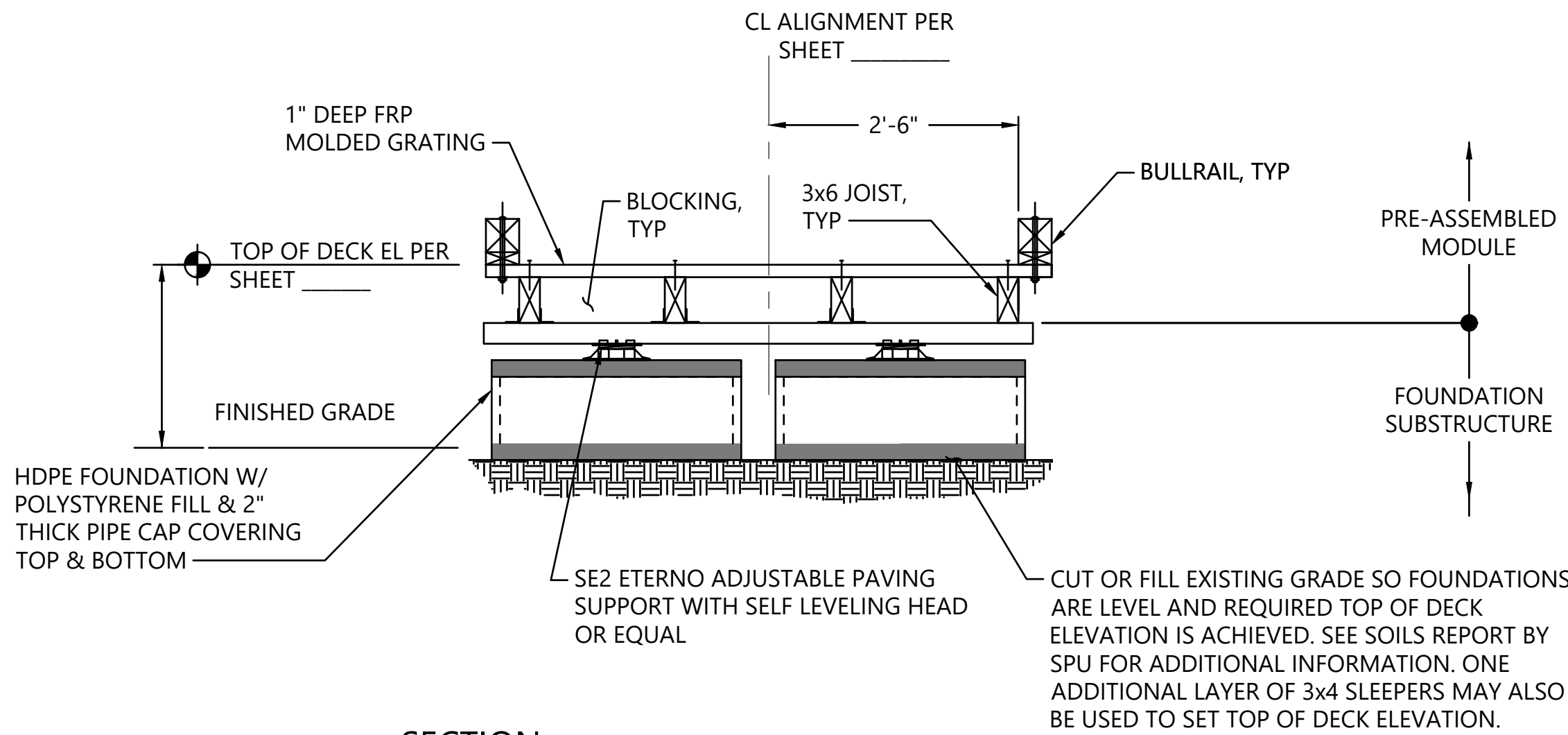


WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
MODULE DETAILS 1

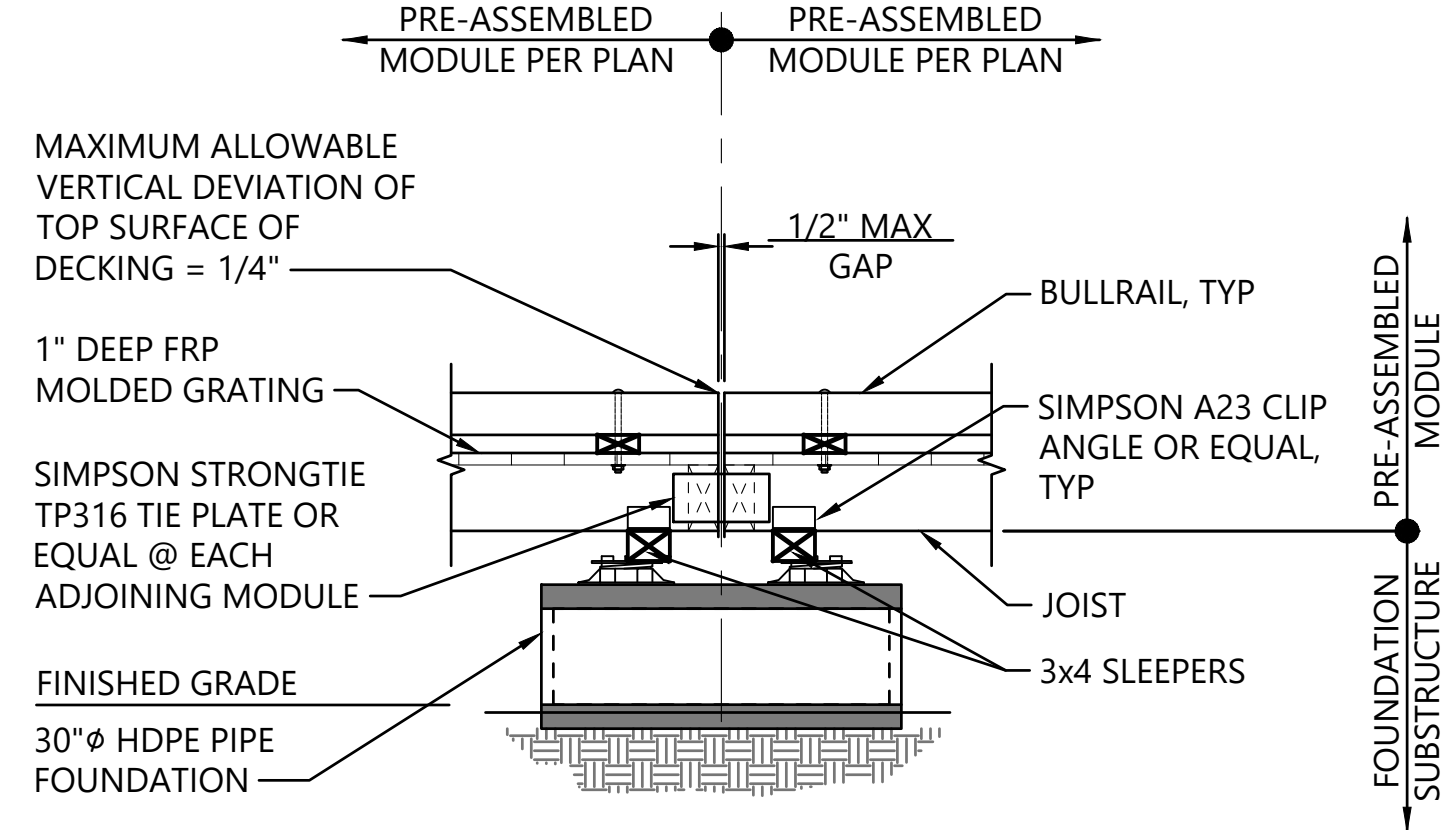
DESIGNED AER
DRAWN TRL
CHECKED IDF
ORDINANCE NO. ORDINANCE
SPECIFICATION NO. CONTRACT
SCALE As Noted

DATE
SHEET 25 OF 31
S-11

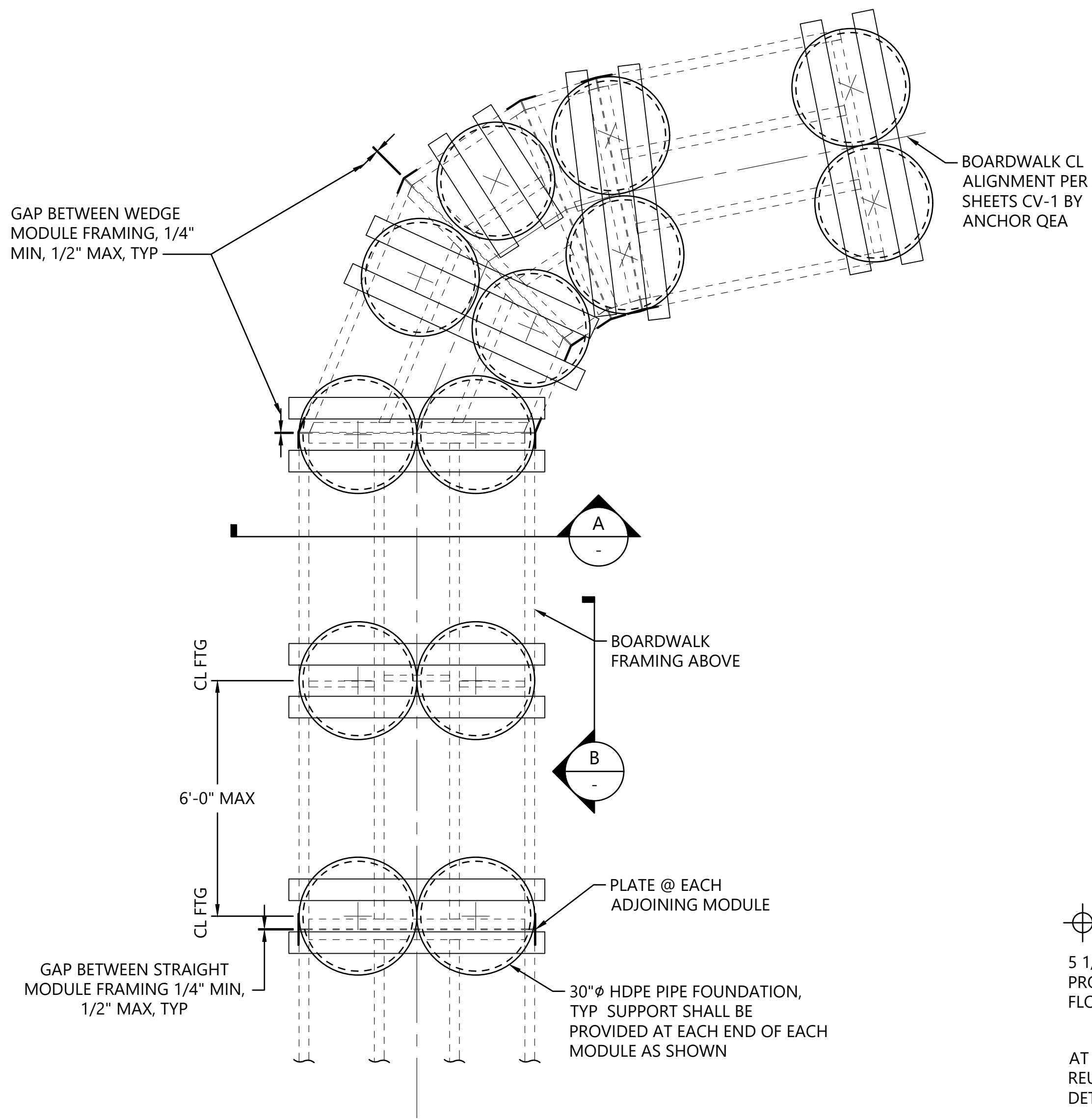
NOTE:
1. AT CONTRACTORS OPTION, AND AT NO ADD'L COST TO THE CITY, 12"Ø X6'-0" HDPE PIPE SEGMENTS MAY BE USED AT EACH 3X4 SLEEPER TO REPLACE THE 30"Ø FOUNDATIONS SHOWN.



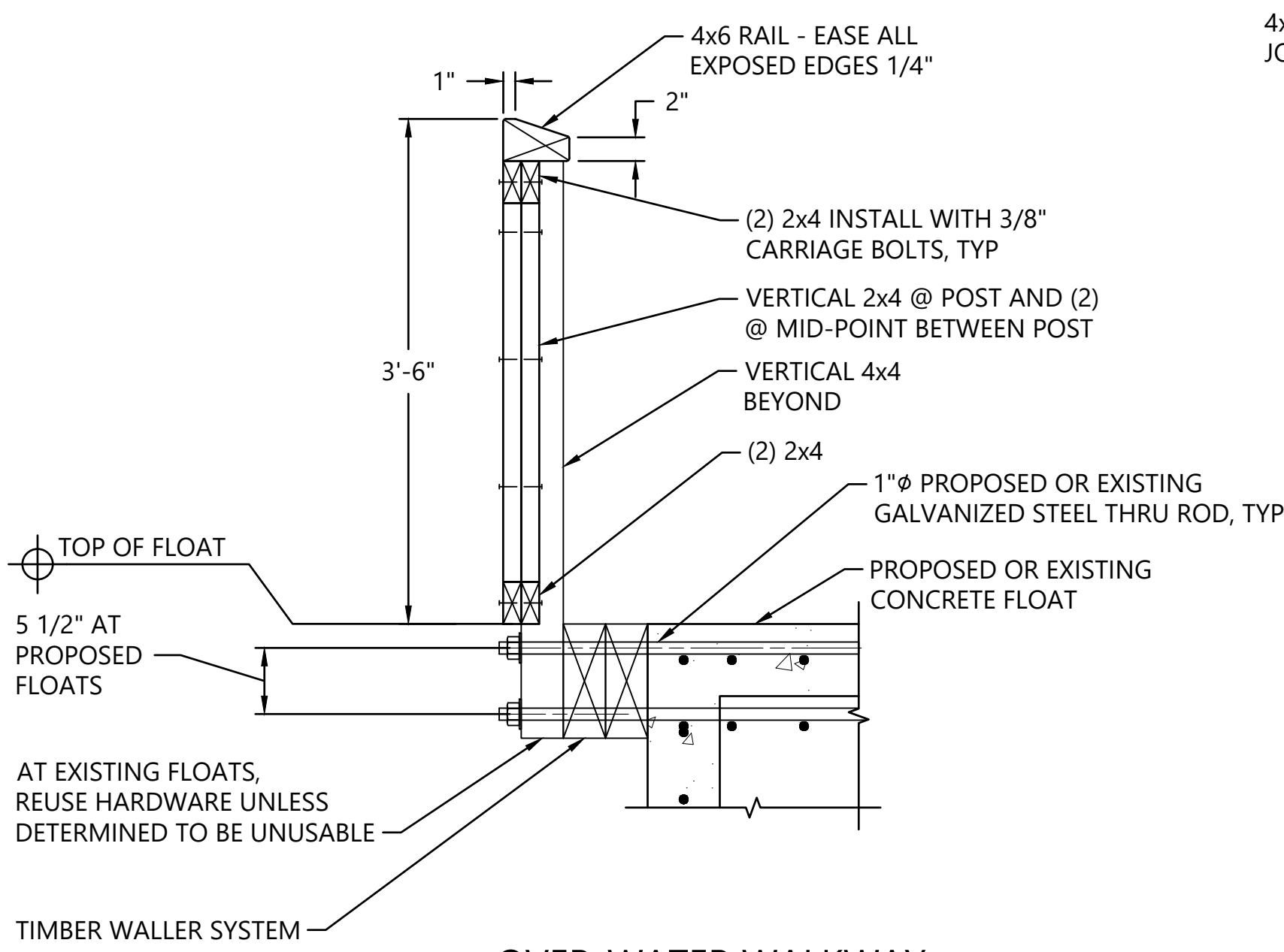
SECTION
A
TYPICAL HDPE PIPE SUPPORTED BOARDWALK
SCALE: 3/4" = 1'-0"



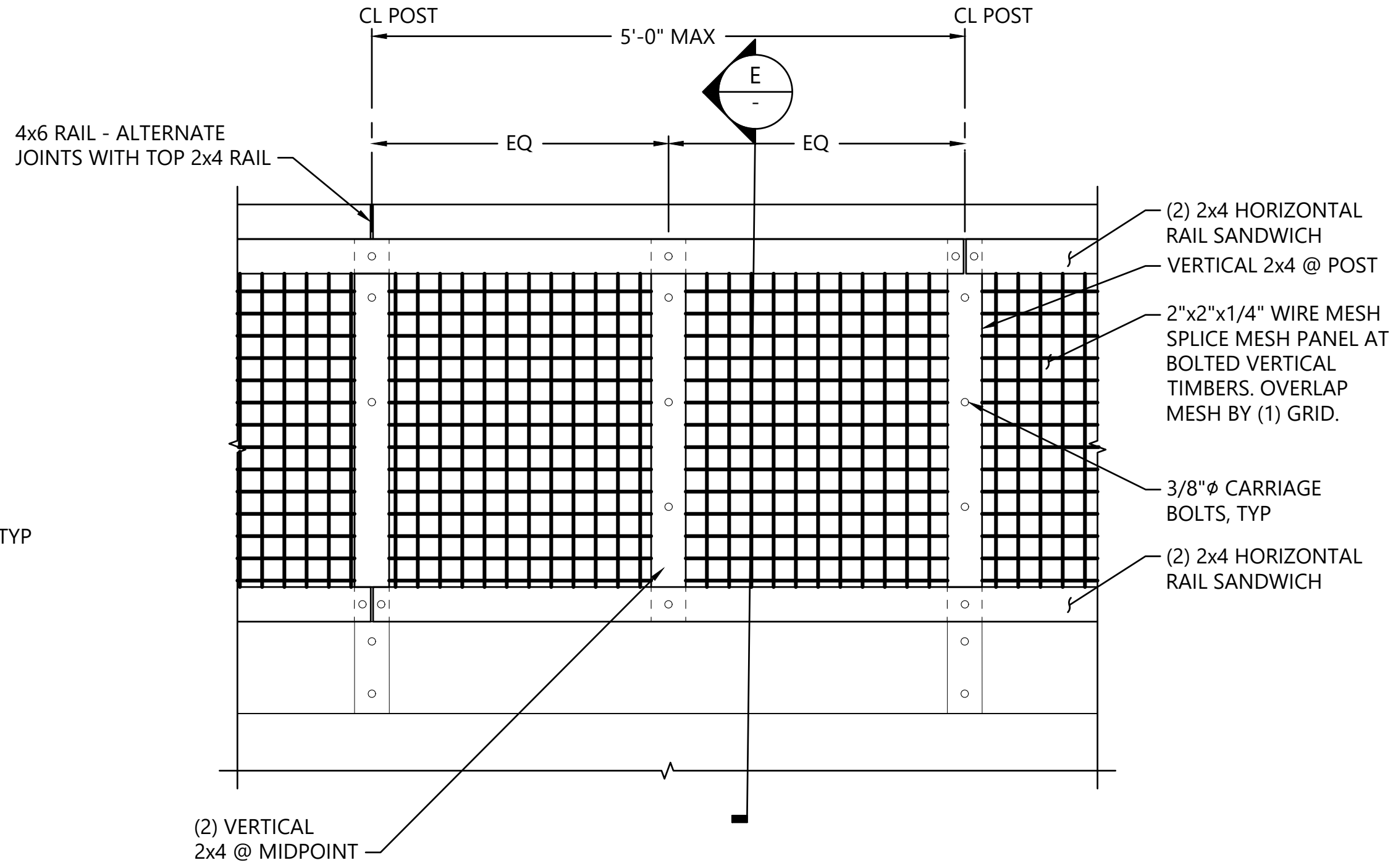
SECTION
B
TYPICAL HDPE PIPE SUPPORTED BOARDWALK
SCALE: 3/4" = 1'-0"



1
TYPICAL FOUNDATION PLAN
PREASSEMBLED BOARDWALK MODULE
SCALE: 1/2" = 1'-0"



E
OVER-WATER WALKWAY
GUARDRAIL SECTION
SCALE: 1" = 1'-0"



D
OVER-WATER WALKWAY
GUARDRAIL ELEVATION
SCALE: 1" = 1'-0"

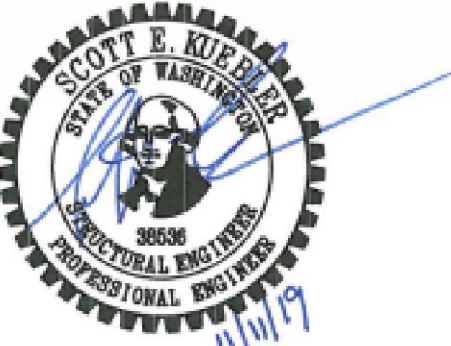
>>>>CAUTION - CALL 811<<<<
UTILITY NOTIFICATION CENTER
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WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
MODULE DETAILS 2

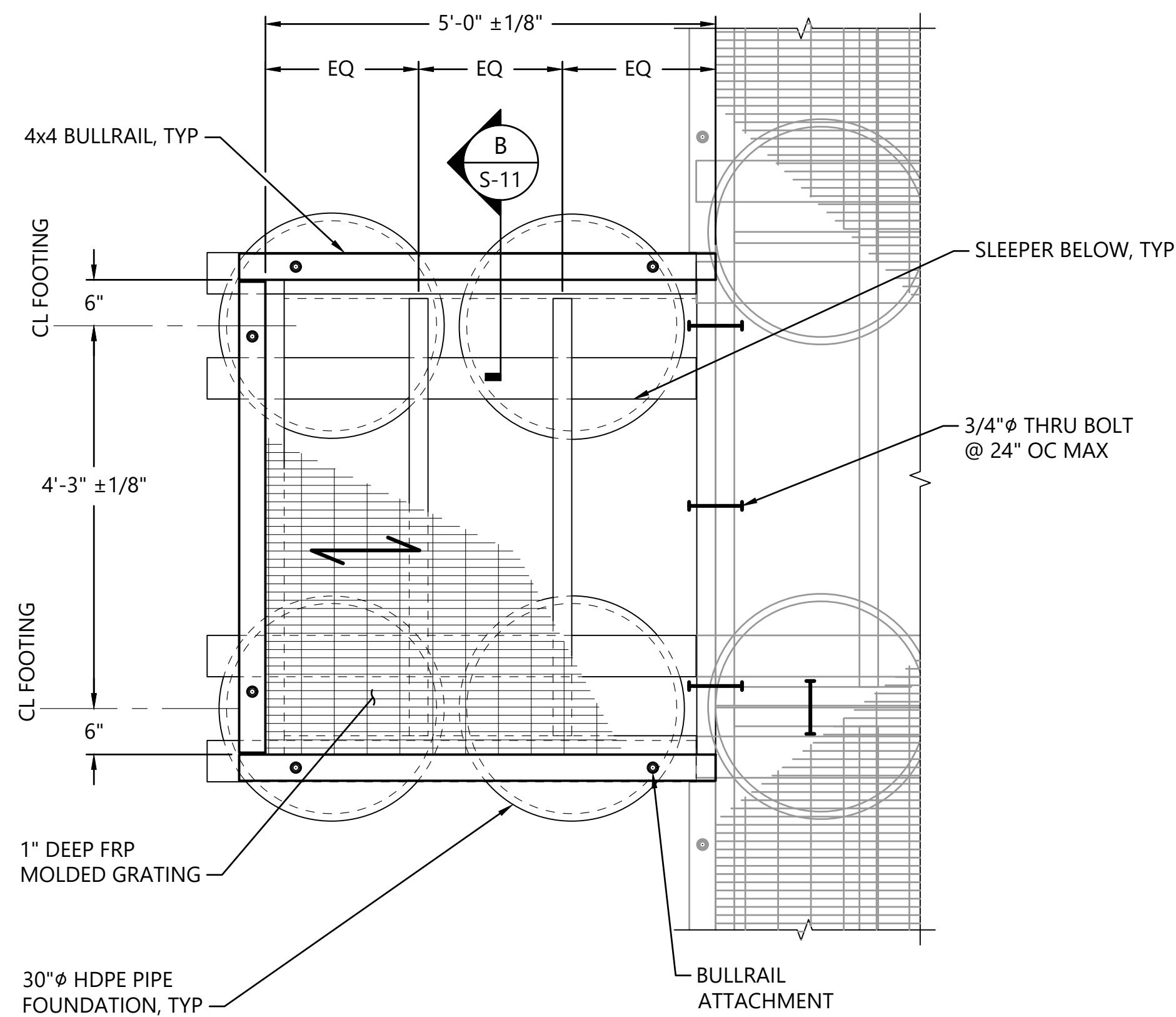
DESIGNED AER
DRAWN TRL
CHECKED IDF
ORDINANCE NO. ORDINANCE
SPECIFICATION NO. CONTRACT
SCALE As Noted

DATE
SHEET 26 OF 31
S-12

100% SUBMITTAL - NOT FOR CONSTRUCTION

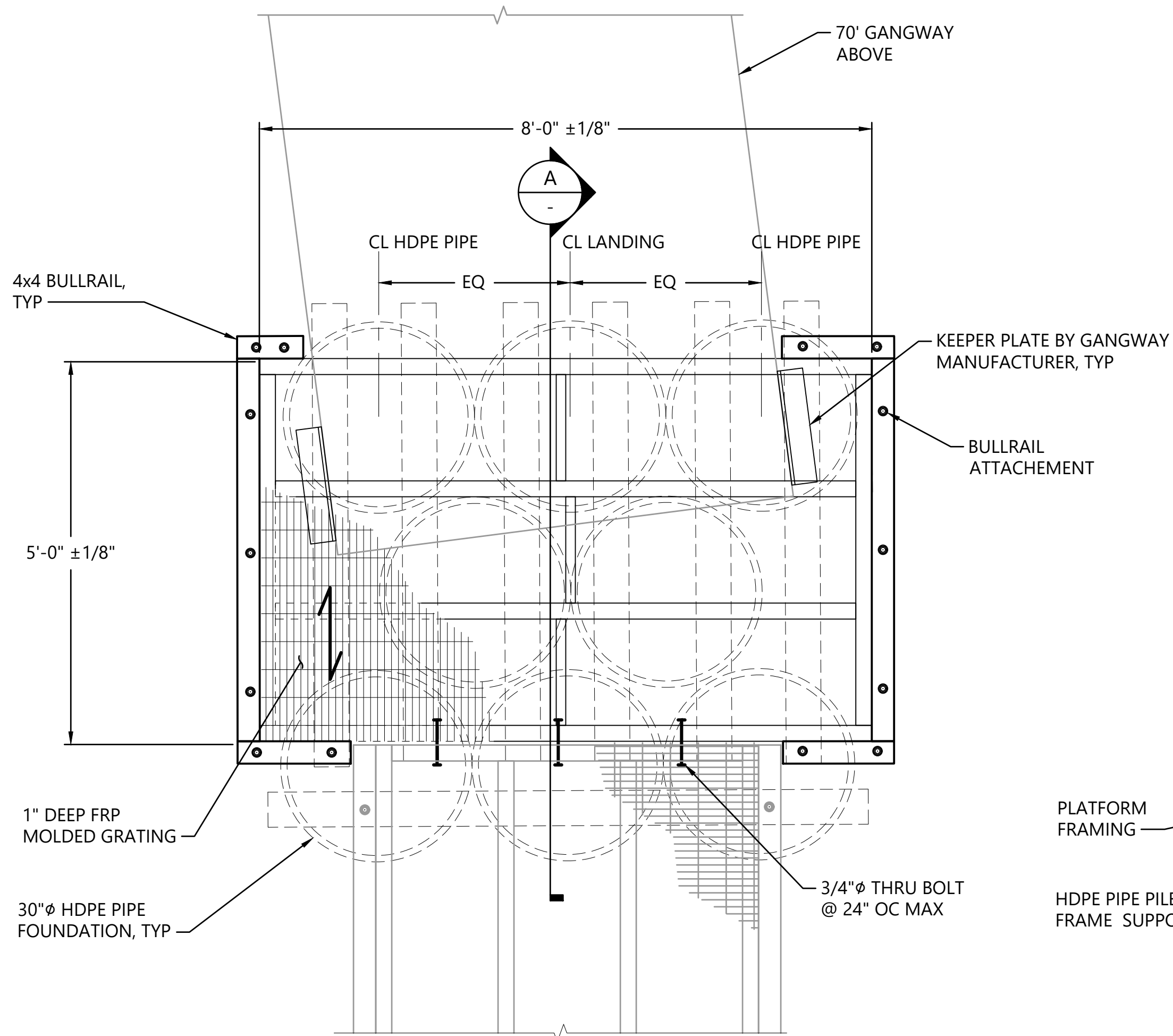
N:\2016\1600057 - Seattle Arboretum Waterfront Trail\Drawings\Current\13_VIEW PLATFORM.dwg VIEW PLATFORM

Mar 04, 2020 7:11pm arondan



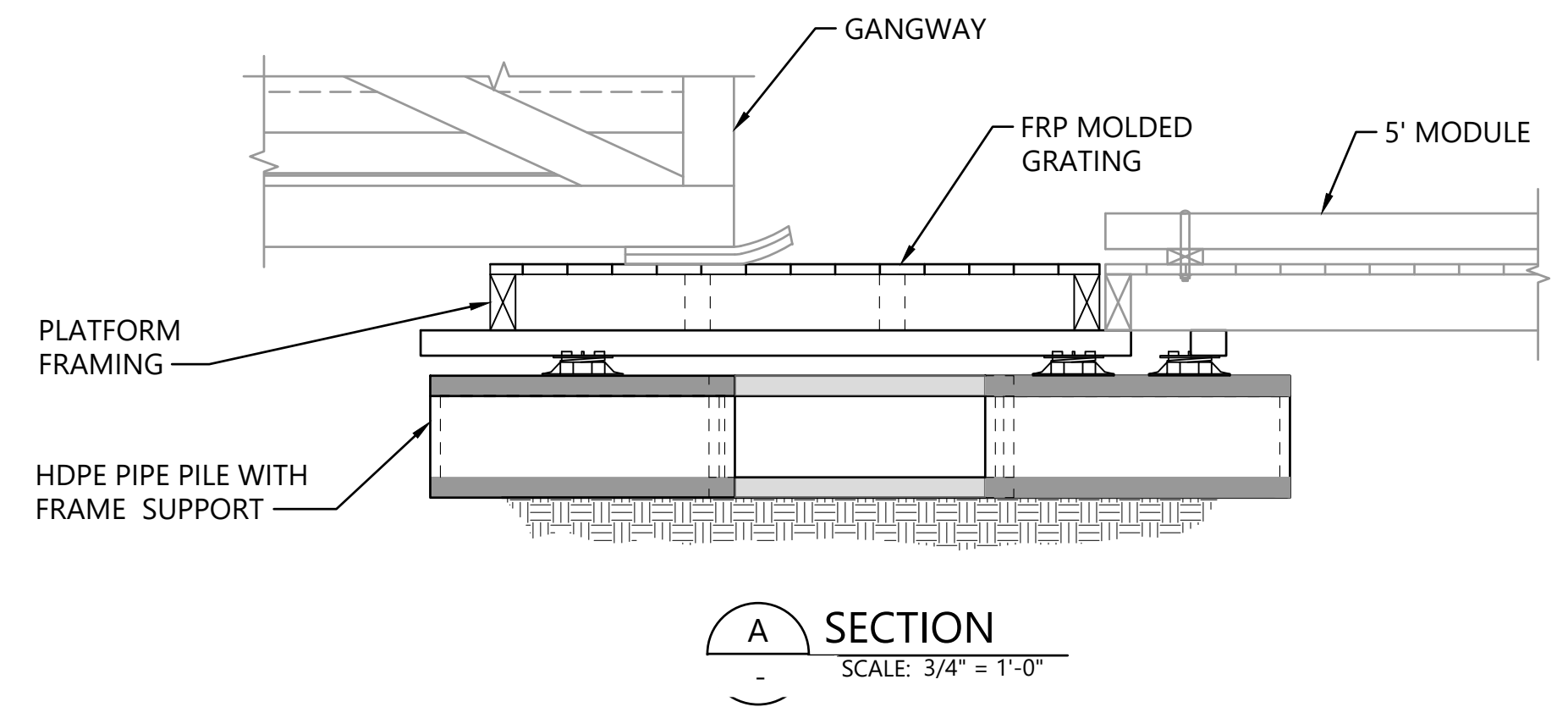
1 FRAMING PLAN
TYPICAL VIEWING PLATFORM
S-5 & S-6 SCALE: 3/4" = 1'-0"

NOTE:
FOR FRAMING SIZES AND CONNECTIONS, SEE
MODULE DETAILS ON S-11 AND S-12



2 FRAMING PLAN
LANDING PLATFORM
S-5 SCALE: 3/4" = 1'-0"

NOTE:
FOR FRAMING SIZES AND CONNECTIONS, SEE
MODULE DETAILS ON S-11 AND S-12



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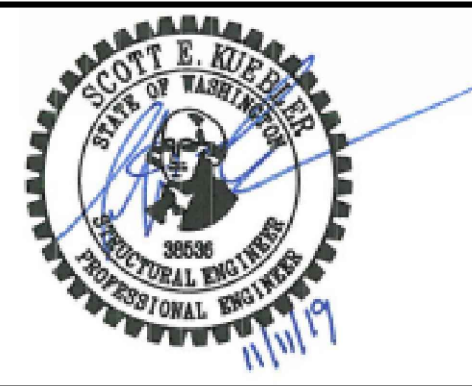
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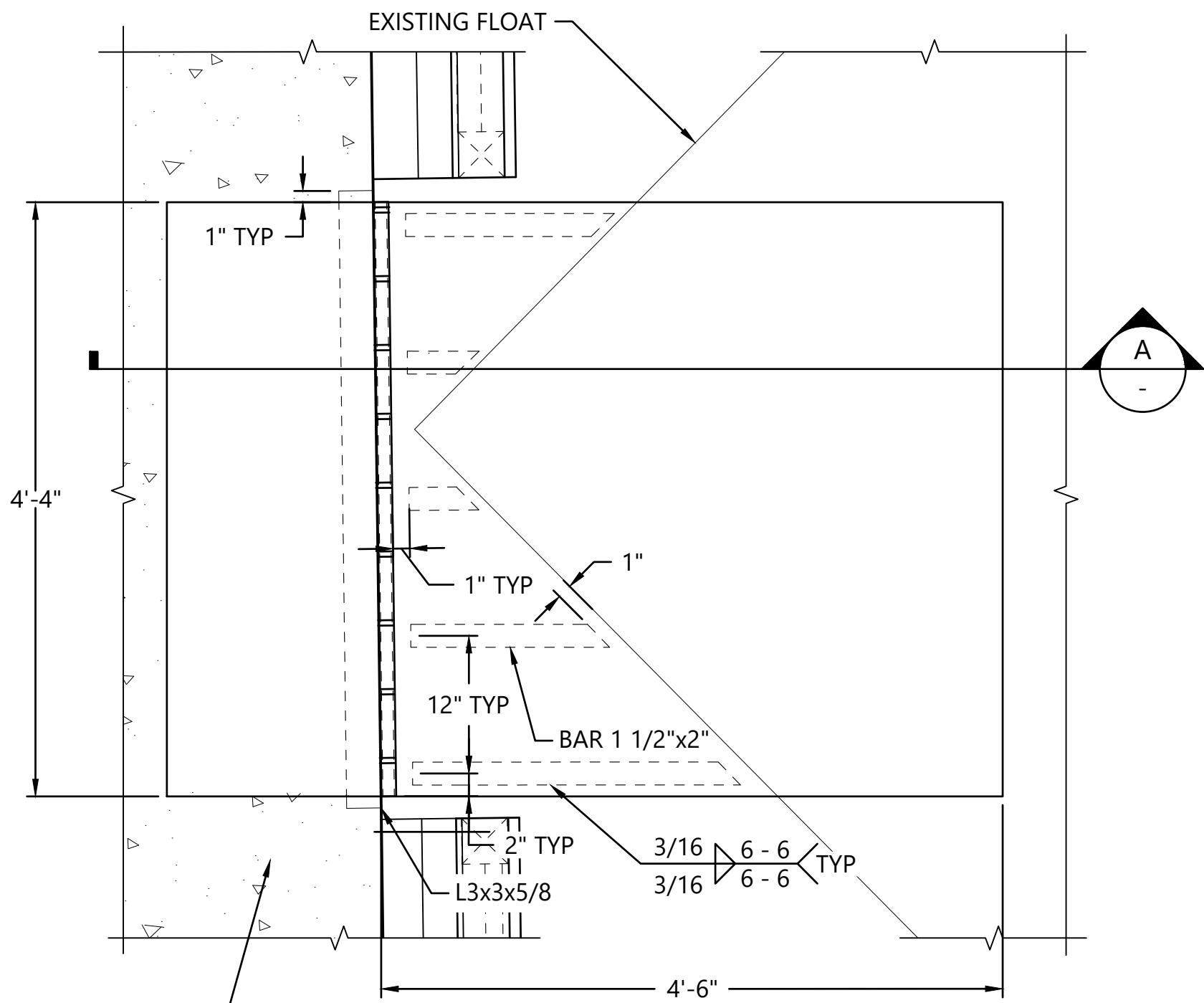
WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
VIEWING PLATFORM DETAILS

DESIGNED	AER
DRAWN	TRL
CHECKED	IDF
ORDINANCE NO.	ORDINANCE
SPECIFICATION NO.	CONTRACT
SCALE	As Noted

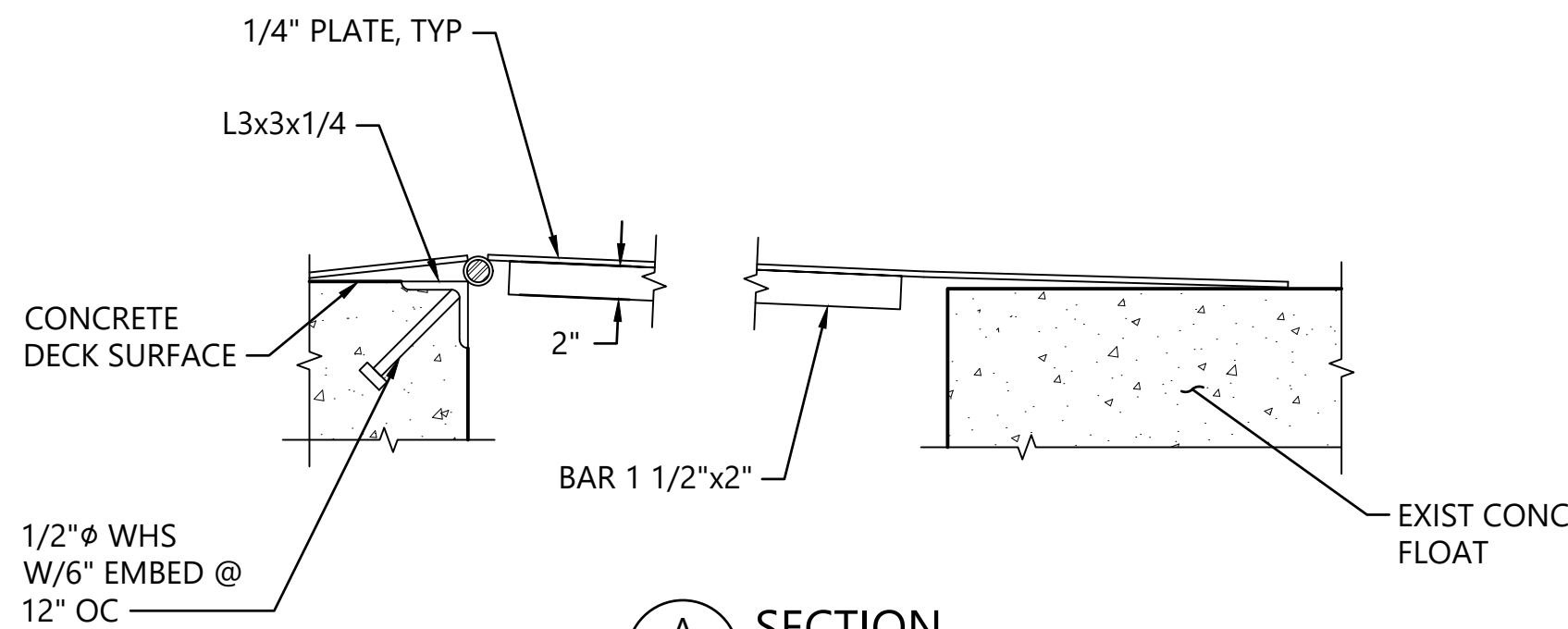
DATE
SHEET 27 OF 31
S-13

N:\2016\1600057 - Seattle Arboretum Waterfront Trail\Drawings\Current\14 - MISC DETAILS.dwg MISC DETAILS

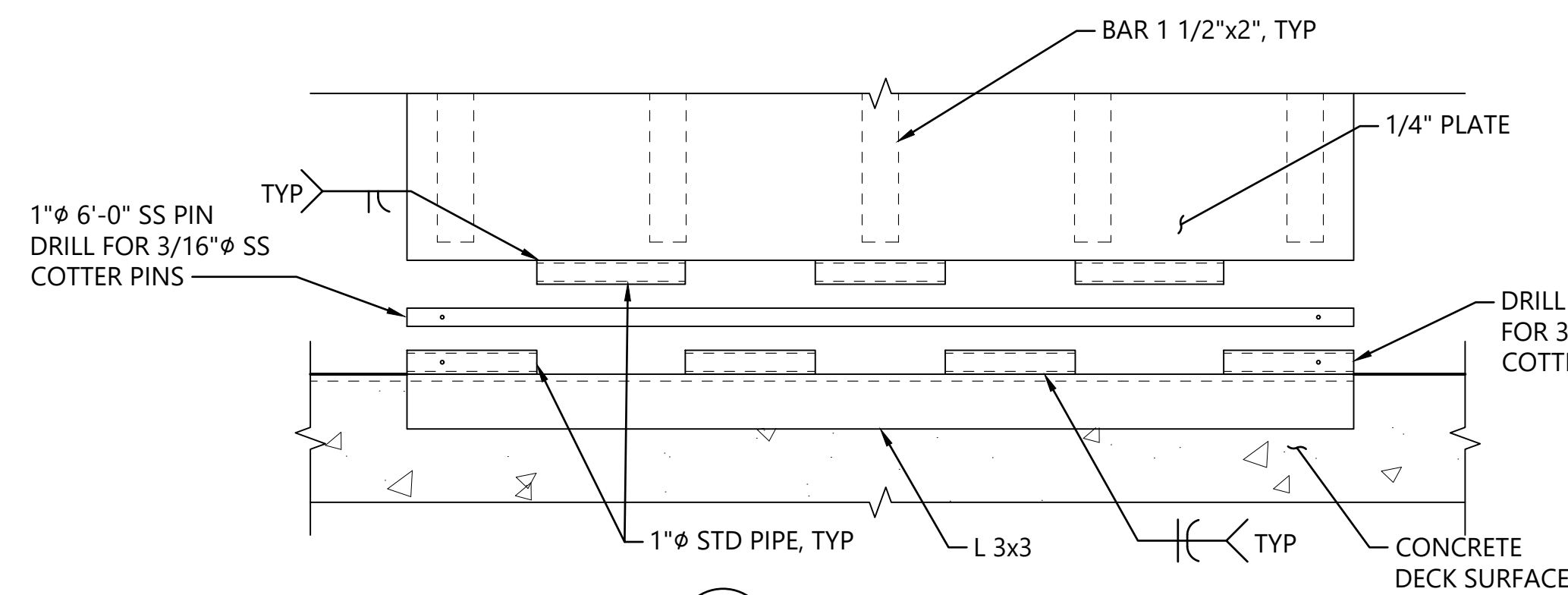
Mar 04, 2020 7:12pm arondan



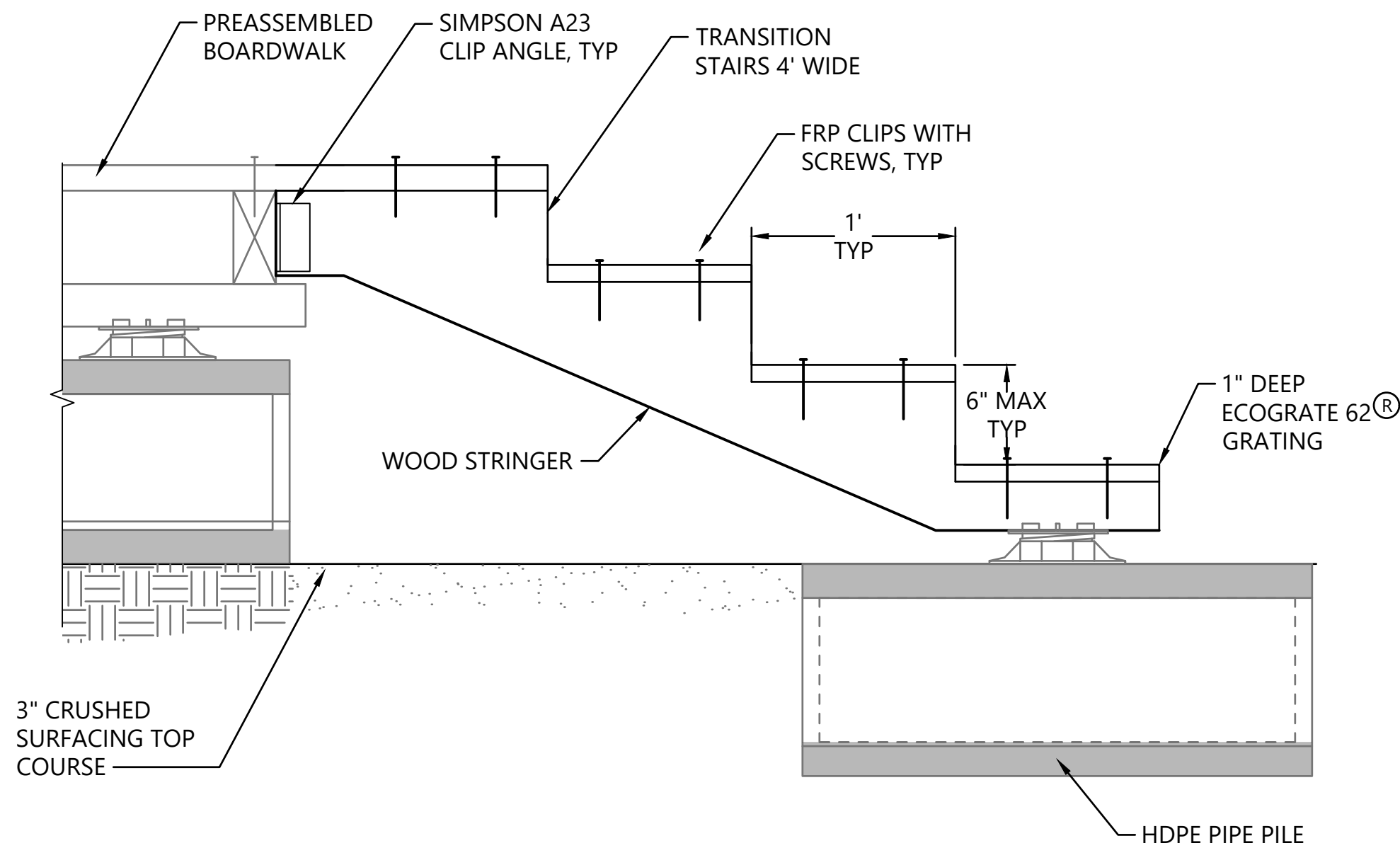
1 TRANSITION PLATE
S-4 SCALE: 1" = 1'-0"



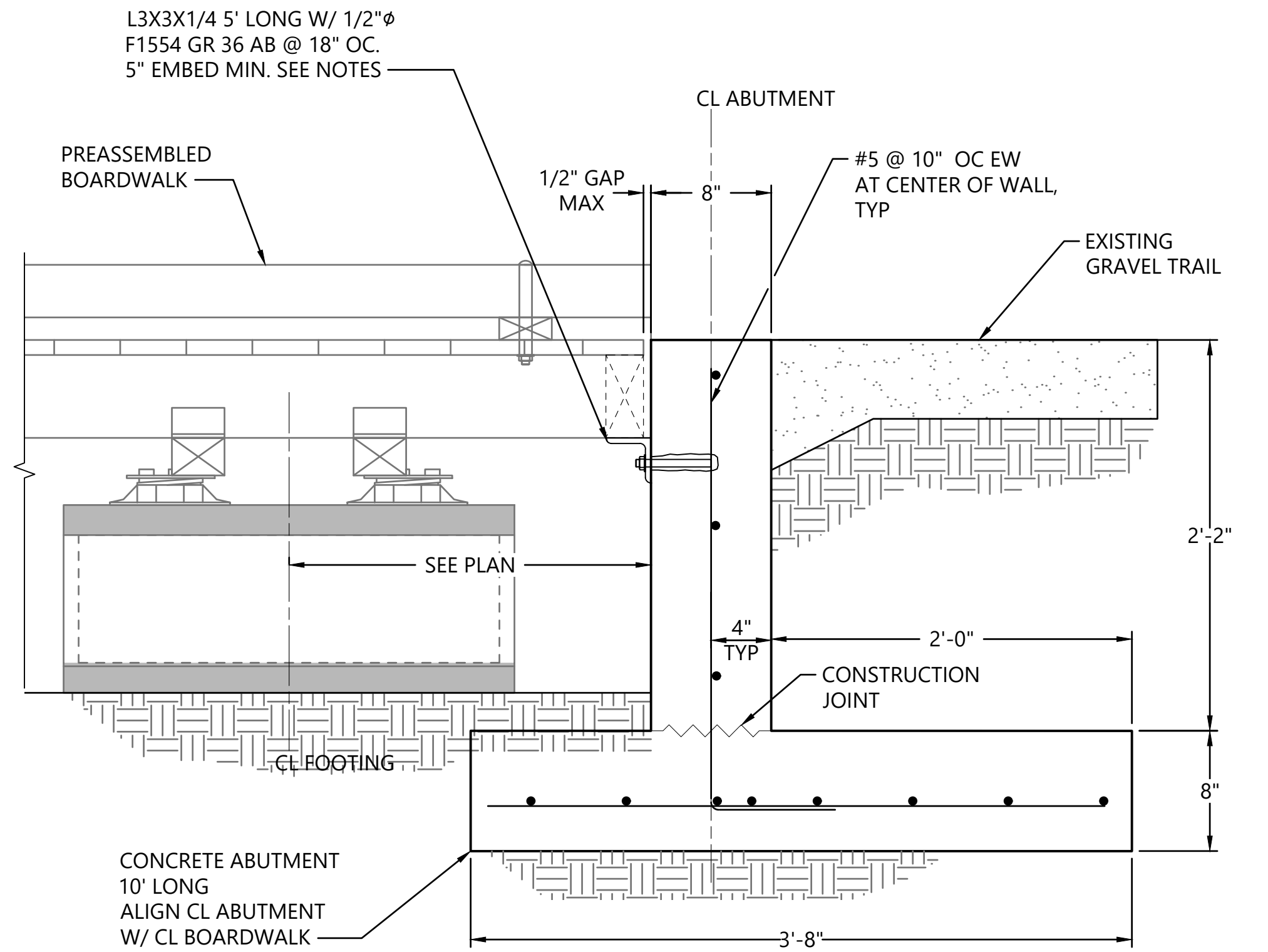
A SECTION
SCALE: 1 1/2" = 1'-0"



2 PIPE HINGE DETAIL
S-10 SCALE: 1 1/2" = 1'-0"



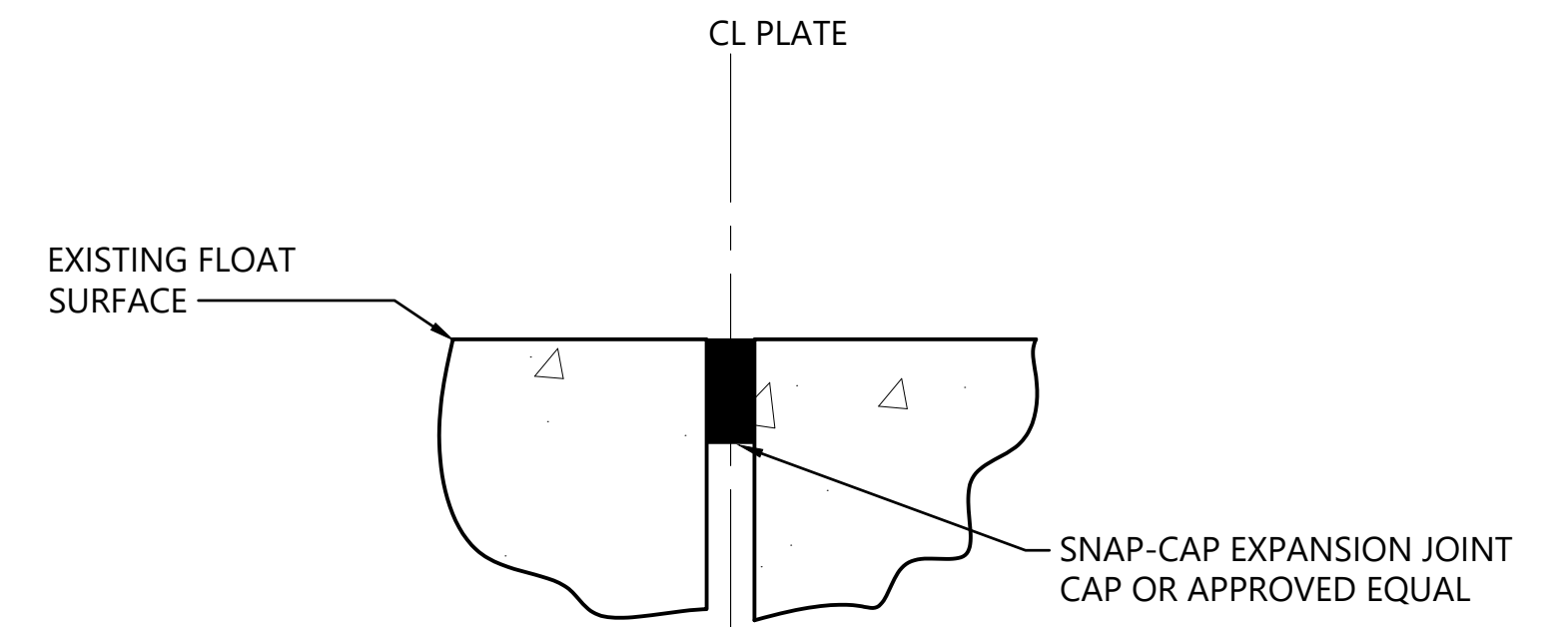
3 TRANSITION STAIRS
S-6 SCALE: 1 1/2" = 1'-0"



4 CONCRETE ABUTMENT
S-7 SCALE: 1 1/2" = 1'-0"

NOTE:

1. CONTRACTOR SHALL LOCATE CONCRETE REINF AND COORDINATE ANCHOR DRILLING. DO NOT CUT REBARS
2. EPOXY OR ADHESIVE-TYPE ANCHORS SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATION. SPECIAL INSPECTION IS REQUIRED FOR ALL ADHESIVE ANCHORS.
3. ACCEPTABLE ADHESIVES ARE HILTI RE 500 V3 (ICC ESR-3814) OR SIMPSON SET-XP SYSTEM (ICC ESR-2508) OR APPROVED EQUAL. ICC REPORTS SHALL BE SUBMITTED FOR ALL ADHESIVE ANCHOR PRODUCTS.



5 EXISTING FLOATS COVER PLATE
S-3, S-4 SCALE: 6" = 1'-0"

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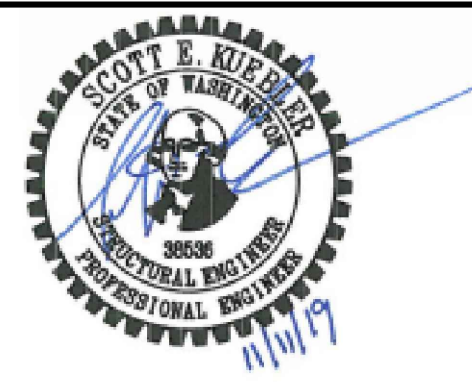
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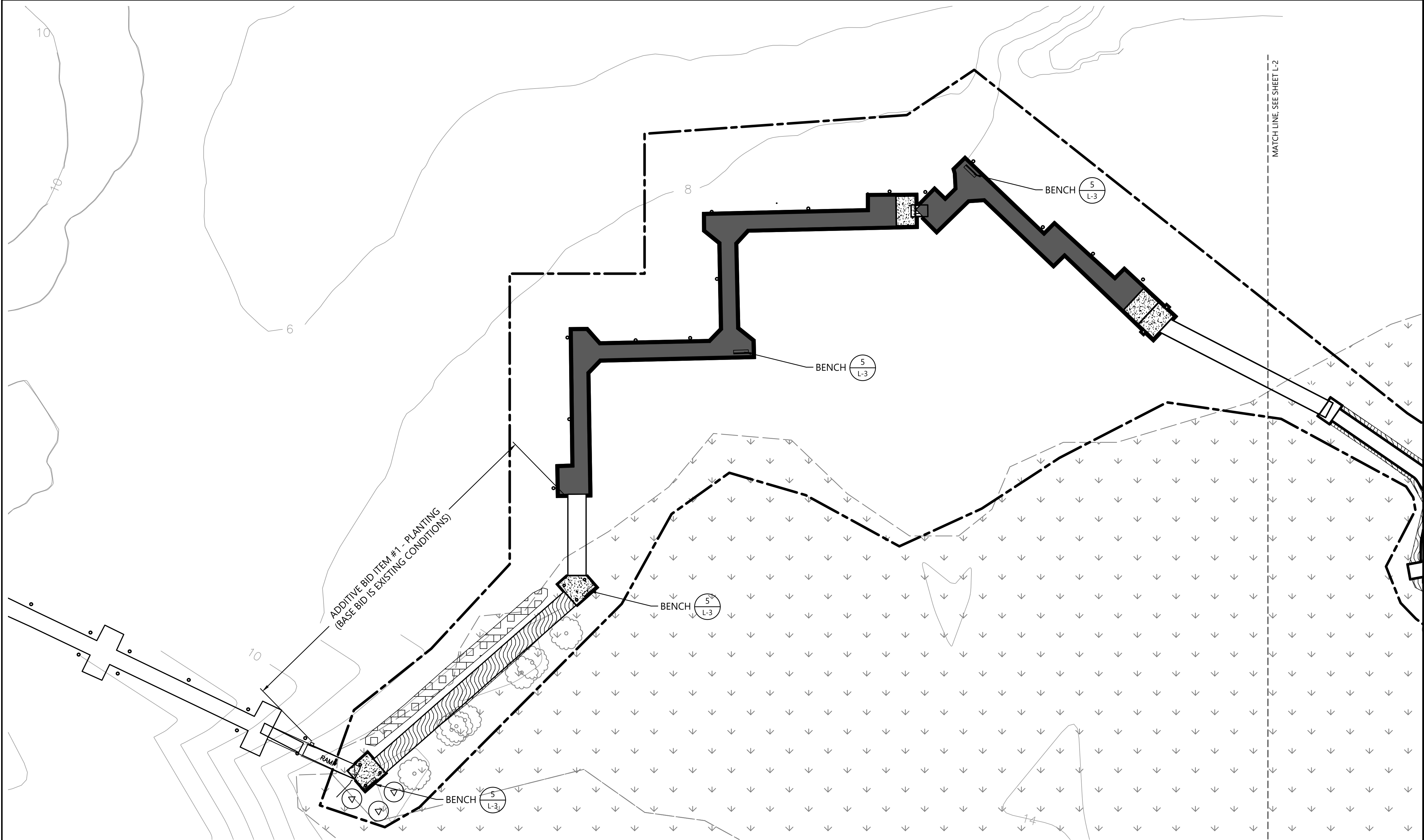
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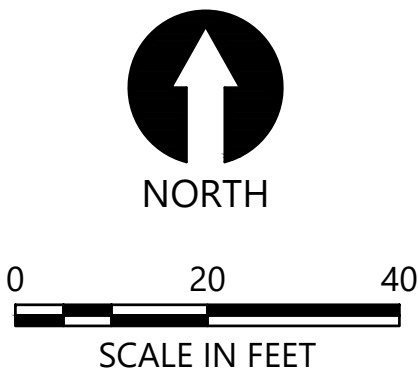
WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
MISCELLANEOUS DETAILS

DESIGNED AER
DRAWN TRL
CHECKED IDF
ORDINANCE NO. _____ ORDINANCE
SPECIFICATION NO. _____ CONTRACT
SCALE As Noted

DATE
SHEET 28 OF 31
S-14



- LEGEND:
- PROJECT BOUNDARY
 - EXISTING CONTOURS
 - EXISTING TREES
 - EXISTING WETLAND
 - PROPOSED TREE
 - PROPOSED EMERGENT PLANTING AREA
 - PROPOSED WILLOW BRUSH LIVE STAKING AREA
 - PROPOSED BENCH



- NOTES:
- HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83, U.S. FEET.
 - VERTICAL DATUM: NAVD88

PLANT SCHEDULE						
COMMON NAME	SCIENTIFIC NAME	SIZE	SPACING	QUANTITY	DETAILS	NOTES
TREES (SEE ADDITIVE BID ITEM #1)						
PAPER BIRCH	BETULA Papyrifera	5 GAL	AS SHOWN	3	1 L-3	
EMERGENTS (SEE ADDITIVE BID ITEM #1)						
SLOUGH SEDGE	Carex obnupta	10-IN PLUG	2' O.C.	102	2,3 L-3	EQUAL MIX OF SPECIES
TAPERTIP RUSH	Juncus acuminatus	10-IN PLUG	2' O.C.	102		
HARDSTEM BULRUSH	Schoenoplectus acutus	10-IN PLUG	2' O.C.	102		
AMERICAN THREE-SQUARE	Scirpus americanus	10-IN PLUG	2' O.C.	102		
SMALL-FRUITED BULRUSH	Scirpus microcarpus	10-IN PLUG	2' O.C.	102		
WILLOW BRUSH LIVE STAKING (SEE ADDITIVE BID ITEM #1)						
HOOKEr WILLOW	Salix hookeriana	LIVESTAKE	2' O.C.	42	4 L-3	EQUAL MIX OF SPECIES
SCOULEr WILLOW	Salix scouleriana	LIVESTAKE	2' O.C.	42		
RED OSIEr DOGWOOD	Cornus sericea	LIVESTAKE	2' O.C.	42		

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NO.	REVISION -- AS BUILT	DATE

REVIEWED: _____ DATE _____
PARK ENGINEER

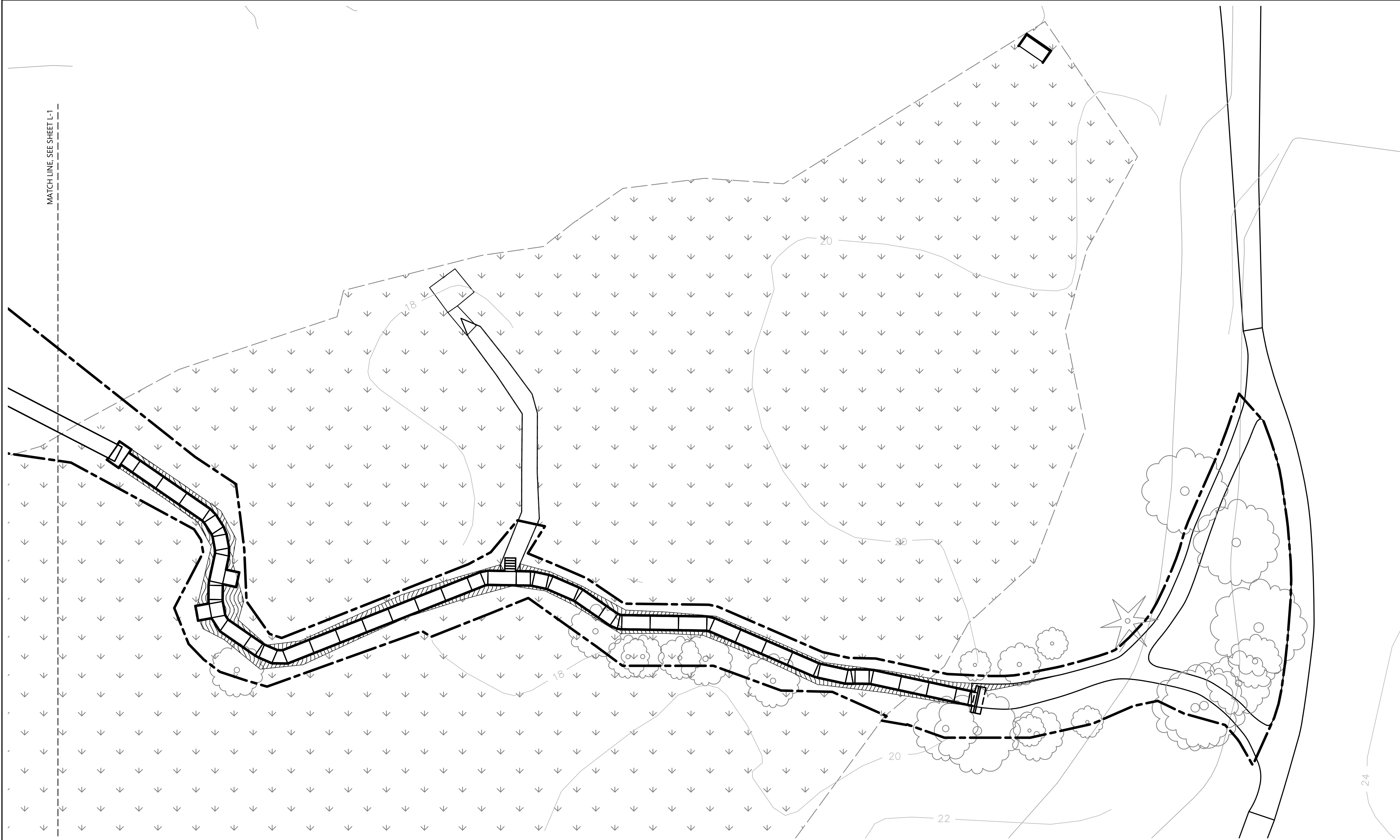
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WASHINGTON PARK ARBORETUM

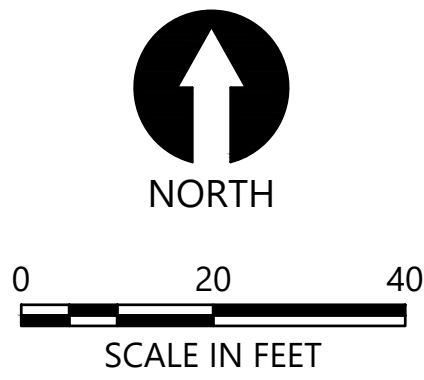
WATERFRONT TRAIL PROJECT

PLANTING AND SITE FURNISHINGS PLAN (1 OF 2) - WEST

DESIGNED PH	DATE OCTOBER 2020
DRAWN BS/CH	
CHECKED PH	SHEET 29 OF 31
ORDINANCE NO.	L-1
SPECIFICATION NO.	
SCALE AS SHOWN	



- LEGEND:
- PROJECT BOUNDARY
 - EXISTING CONTOURS
 - EXISTING TREES
 - EXISTING WETLAND
 - PROPOSED TREE
 - PROPOSED EMERGENT PLANTING AREA



- NOTES:
- HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD 83, U.S. FEET.
 - VERTICAL DATUM: NAVD88
 - SEE SHEET L-1 FOR PLANT SCHEDULE.

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NO.	REVISION -- AS BUILT	DATE

REVIEWED: _____ DATE _____

PARK ENGINEER

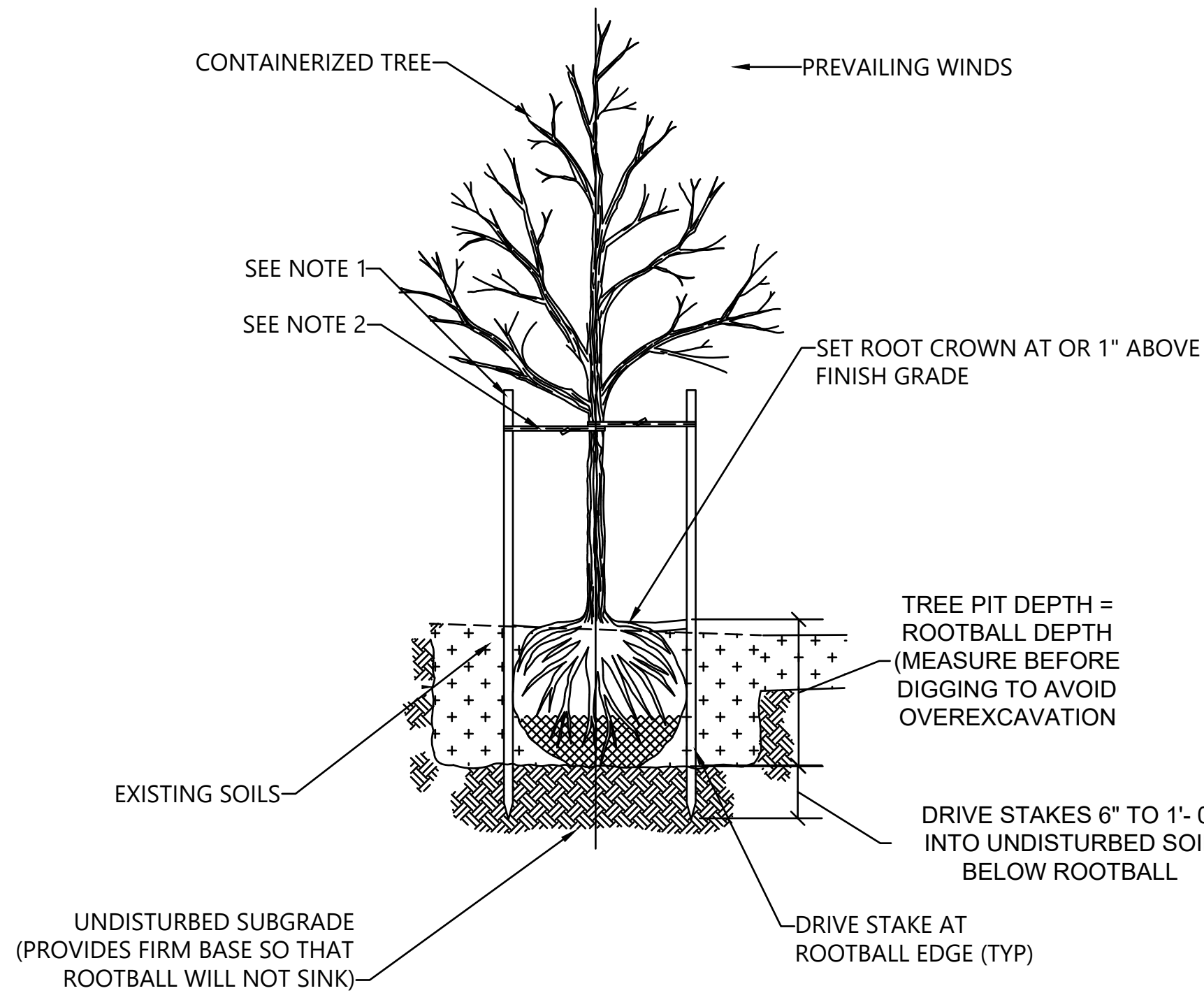
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WASHINGTON PARK ARBORETUM

WATERFRONT TRAIL PROJECT

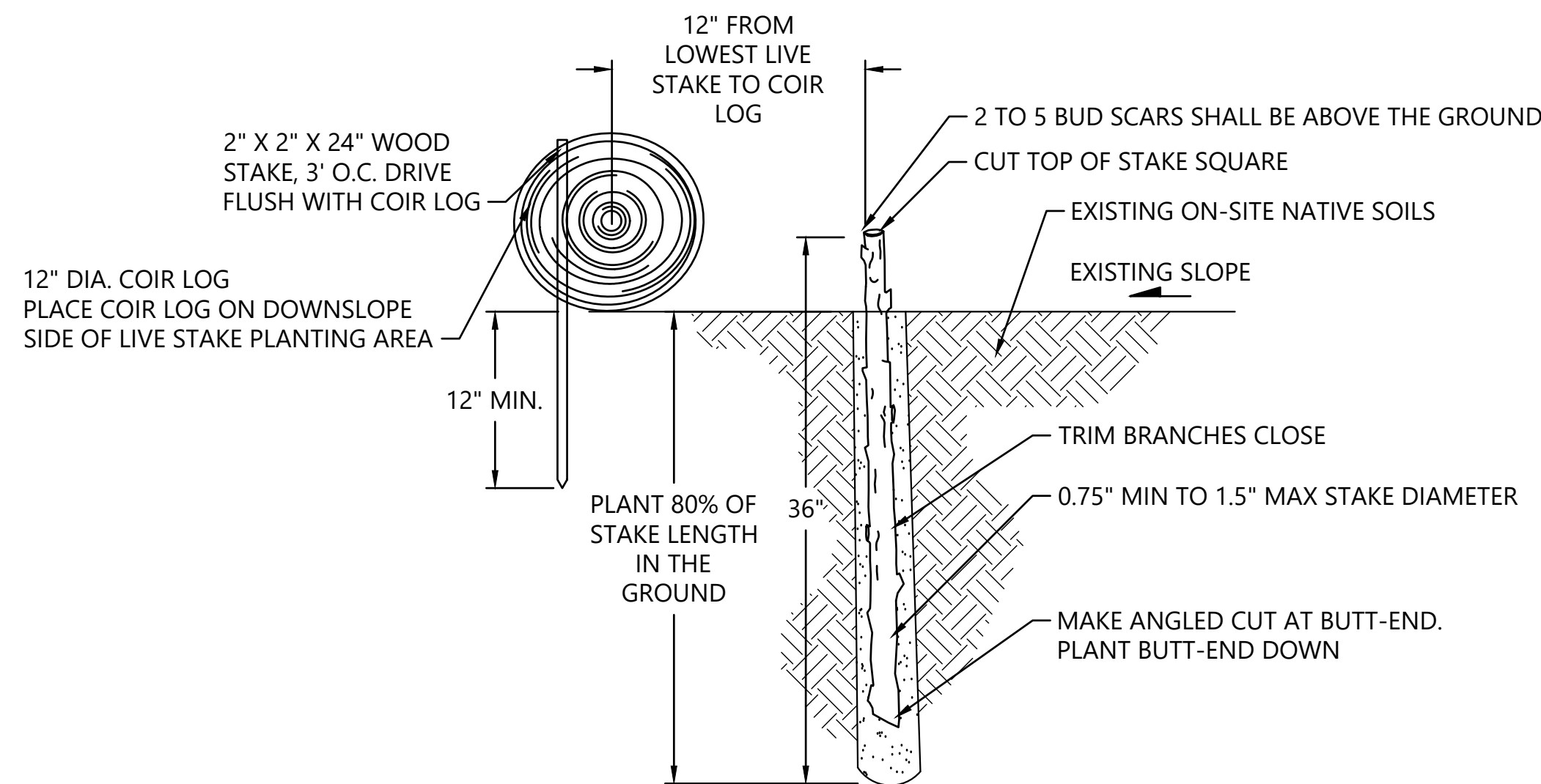
PLANTING AND SITE FURNISHINGS PLAN (2 OF 2) - EAST

DESIGNED PH	DATE OCTOBER 2020
DRAWN BS/CH	
CHECKED PH	SHEET 30 OF 31
ORDINANCE NO.	L-2
SPECIFICATION NO.	
SCALE AS SHOWN	



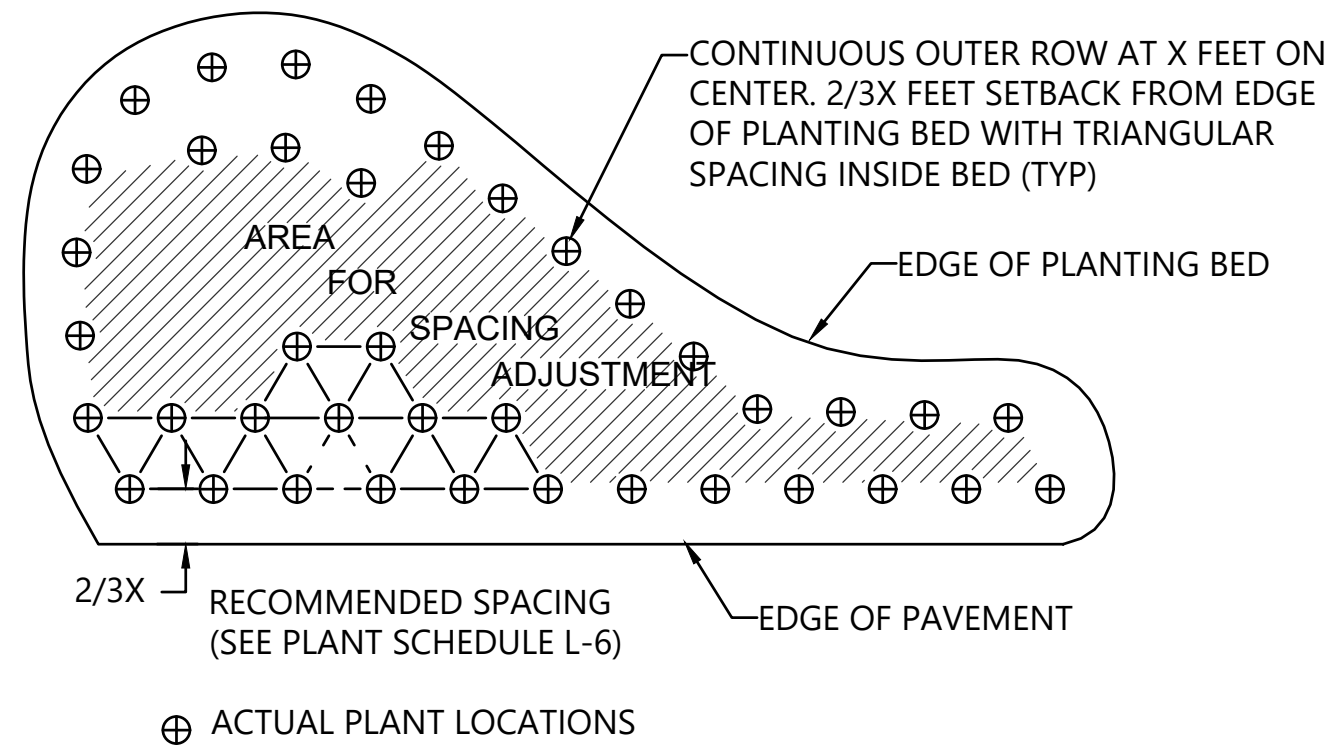
- NOTES:
1. STAKE TREES WITH (2) 2" DIAMETER (8'-0" LENGTH) LODGE POLE PINE OR DOUGLAS FIR STAKES
 2. CHAINLOCK TREE TIE. LOOP EACH TIE AROUND TREE LOOSELY TO PROVIDE 1" SLACK FOR DIAMETER GROWTH.
 3. ONE STAKE PER TREE ON WINDWARD SIDE; SECOND STAKE ON LEEWARD SIDE

1 TREE PLANTING & STAKING
L-1 SCALE: NTS



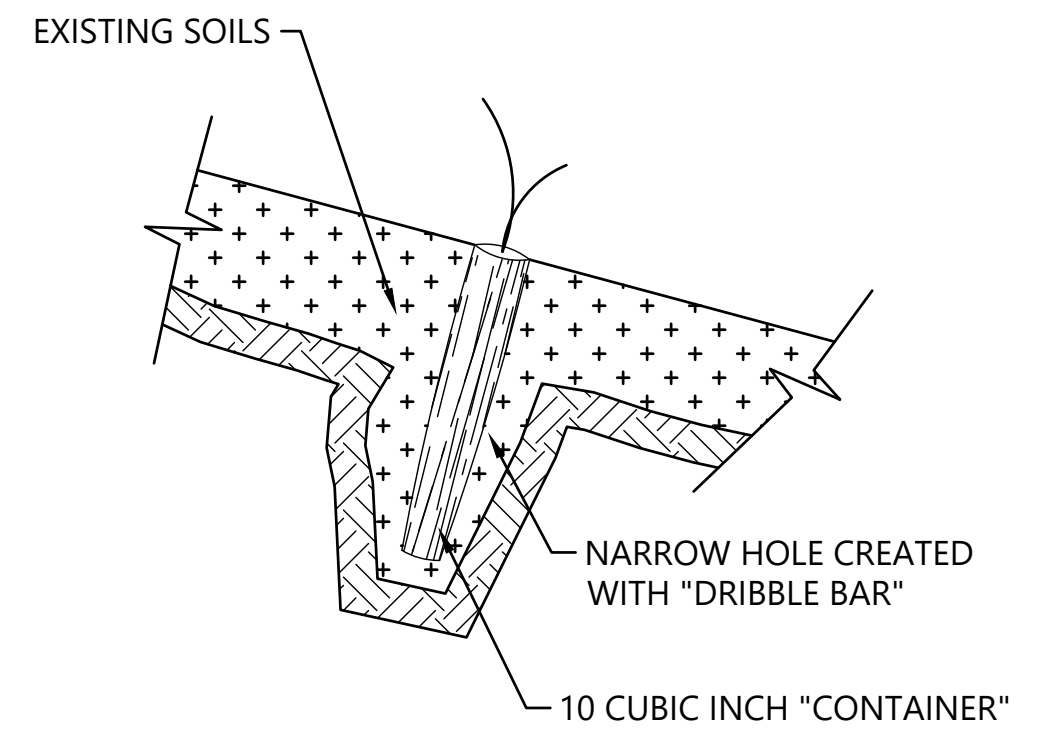
- NOTES:
1. HARVEST AND PLANT STAKES DURING THE DORMANT SEASON.
 2. MAKE CLEAN CUTS AND DO NOT DAMAGE STAKES OR SPLIT ENDS DURING INSTALLATION, USE A PILOT BAR IN FIRM SOILS.
 3. SOAK CUTTINGS CONTINUOUSLY PRIOR TO INSTALLATION.
 4. TAMP THE SOIL AROUND THE STAKE.
 5. ONLY NURSERY GROWN STOCK SHALL BE USED. HARVESTING OF WILD PLANTS IS NOT ACCEPTABLE.
 6. USE EQUAL NUMBER AND EVEN DISTRIBUTION OF EACH WILLOW SPECIES.
 7. EXTEND COIR LOG ENTIRE LENGTH OF LIVESTAKE PLANTING STRIP.

4 LIVE STAKE PLANTING AND COIR LOG INSTALLATION
L-1 SCALE: NTS

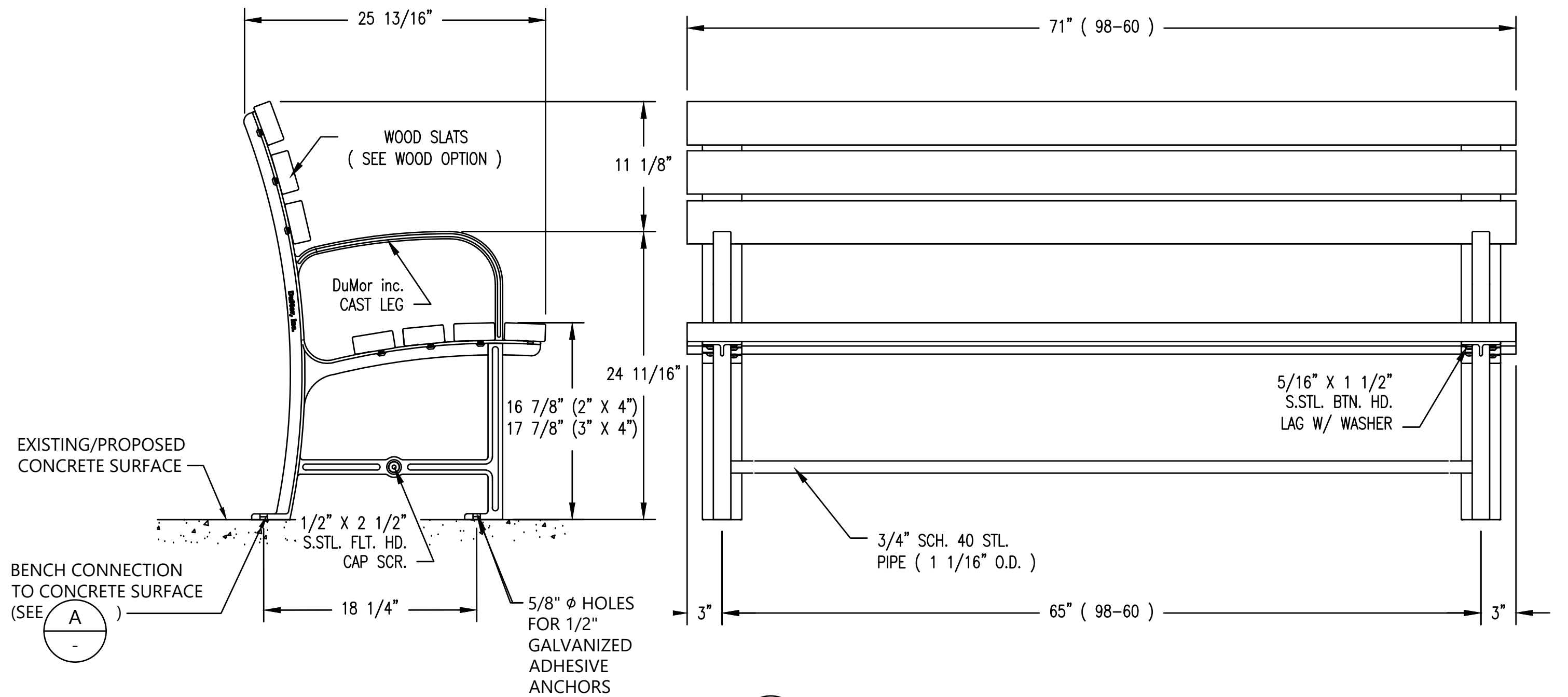


NOTES: APPLY PLANTING PATTERN FOR SHRUB AND EMERGENT PLANTINGS

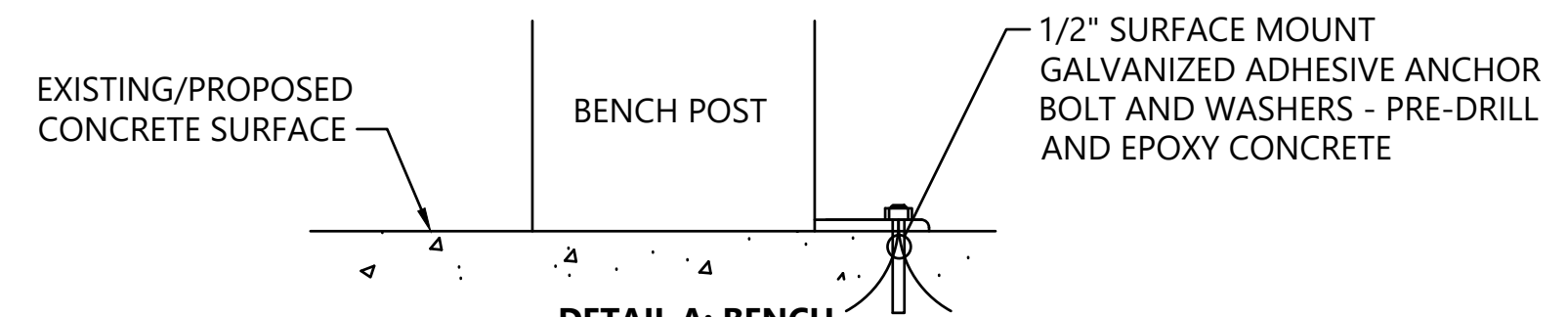
2 PLANTING PATTERN
L-1 SCALE: NTS



3 EMERGENT PLANTING
L-2 SCALE: NTS



5 BENCH DETAIL
L-1&2 SCALE: NTS



A BENCH CONNECTION DETAIL AT CONCRETE SURFACE
SCALE: NTS

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WASHINGTON PARK ARBORETUM
WATERFRONT TRAIL PROJECT
PLANTING AND BENCH
DETAILS

DESIGNED BS
DRAWN BS/CH
CHECKED PH
ORDINANCE NO. _____
SPECIFICATION NO. _____
SCALE AS SHOWN

DATE OCTOBER 2020
SHEET 31 OF 31
L-3